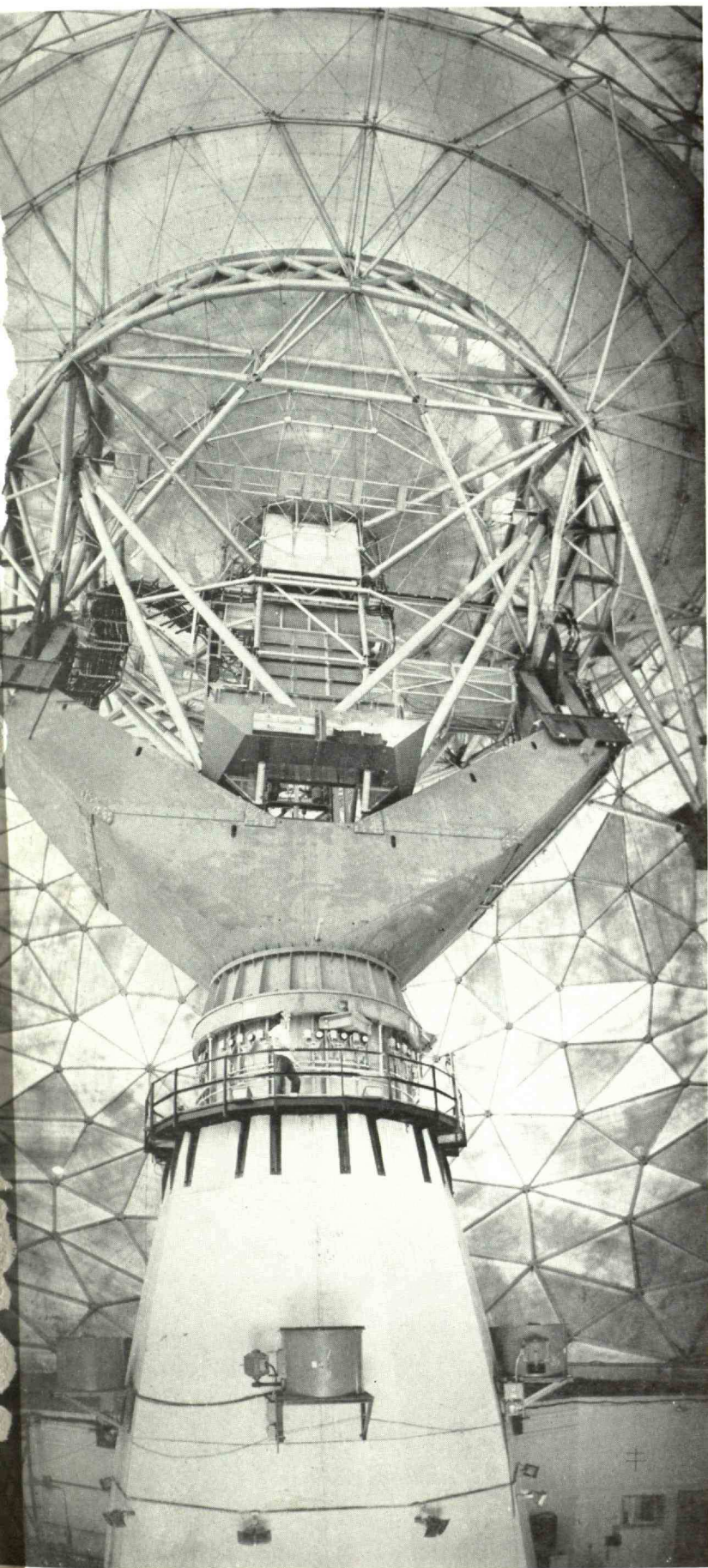


# Technology Review

Edited at the Massachusetts Institute of Technology



## **The Nature of Man**

**Articles by Professors Harlow Shapley, David H. Frisch, Sidney W. Mintz, Walter A. Rosenblith, Richard M. Douglas, and Huston Smith—summarizing lectures at the 1964 M.I.T. Alumni Seminar**

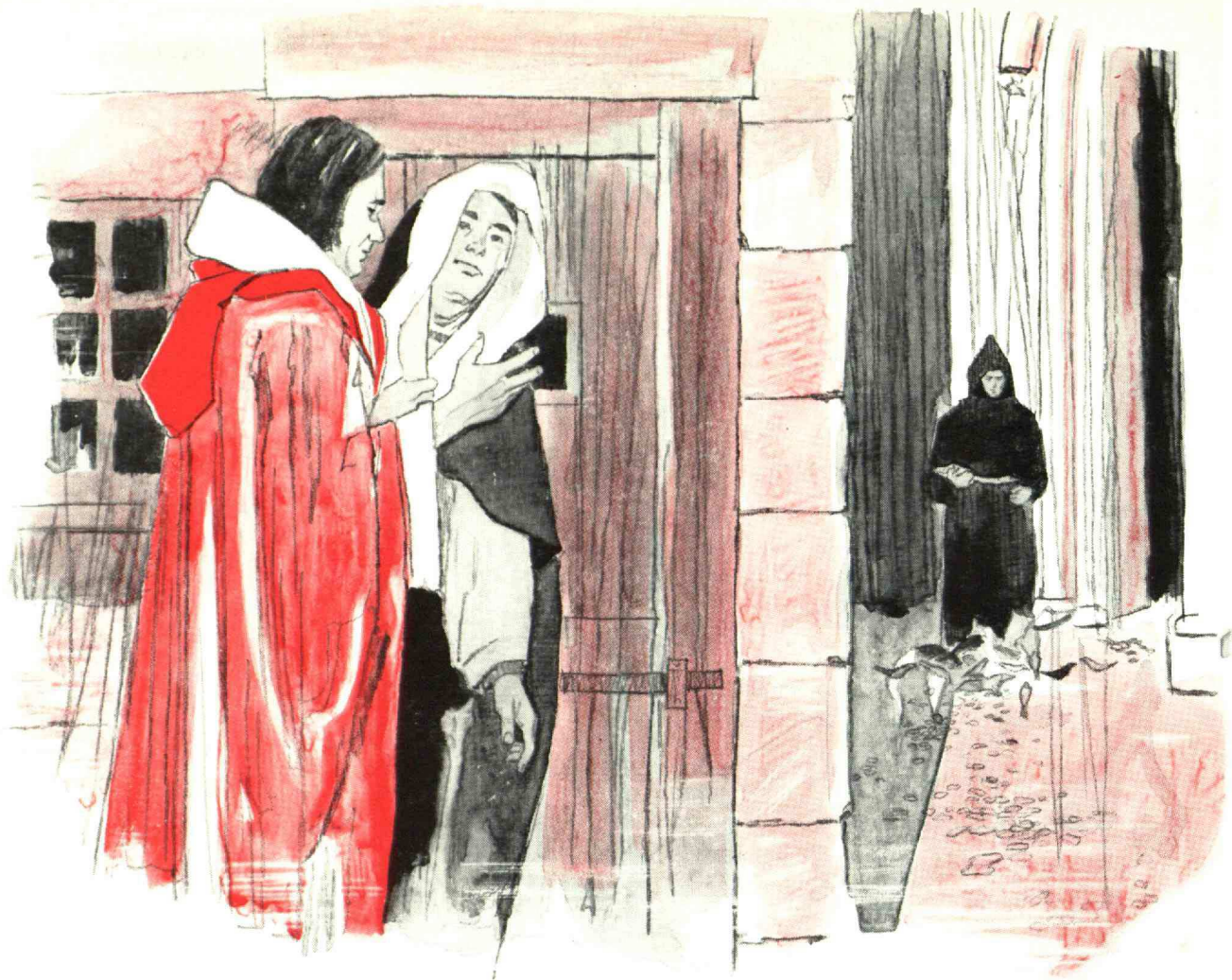
**November, 1964**

# technology review

Published by MIT

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## *XIVth* Century Hoods

*Around the XIVth Century, practitioners of many trades and professions were identified by distinctive hoods. This convenient arrangement was not overlooked by phonies. Desiring to practice medicine, for instance, a rogue donned physician's hood and sought out patients to fleece where he wasn't known. His headgear, of course, was a false hood . . . a term later fused into one word to apply to deceit in general.*

## 20th Century Hoods

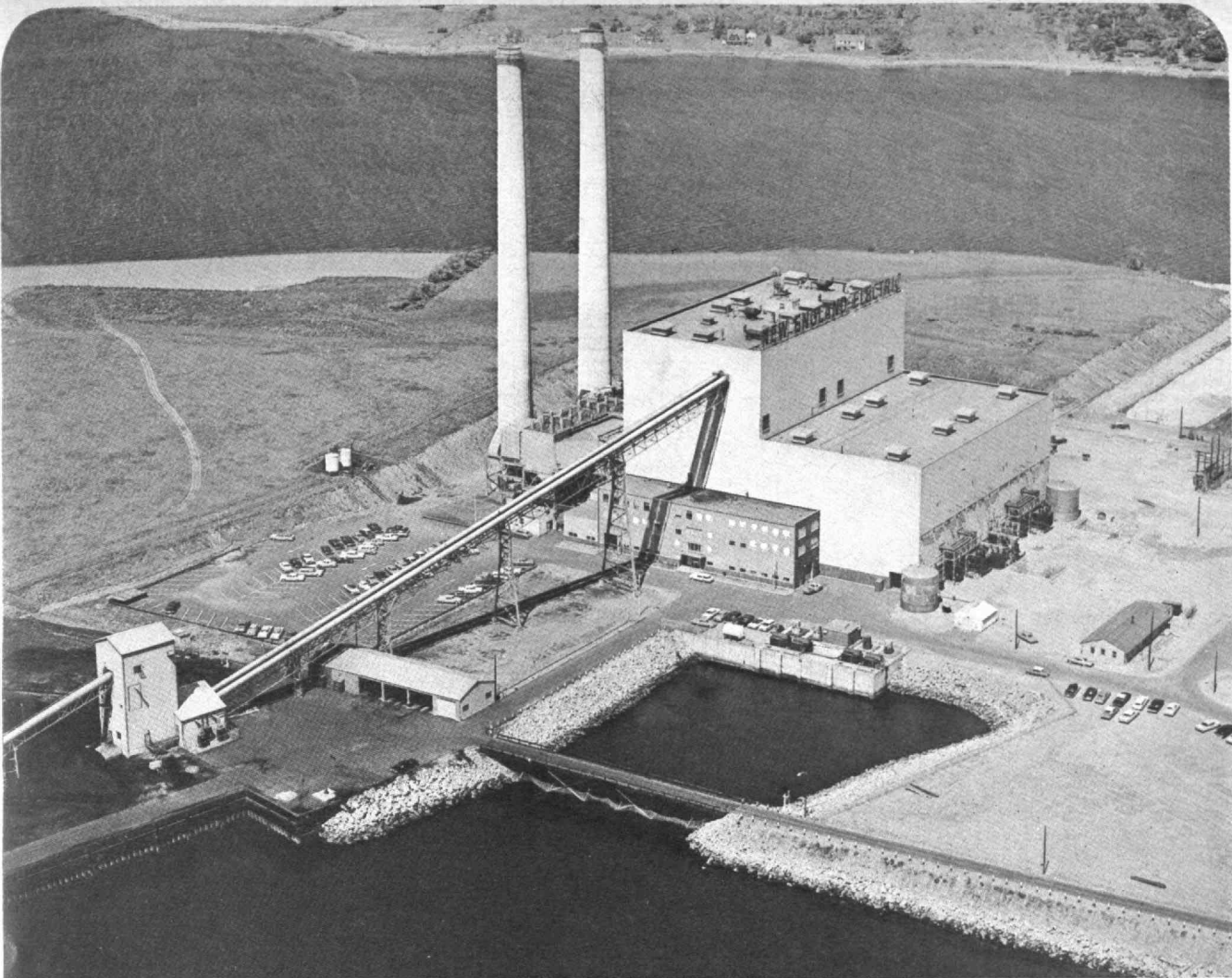
A hood that has long been relied on to signify the finest in simplified high-voltage terminals is the Kerite terminal hood. Kerite developed it back in the 1920's, long before such an idea had occurred to any other cable maker. Its design proved uncommonly sound. Thousands of the first hoods Kerite made are still in serv-

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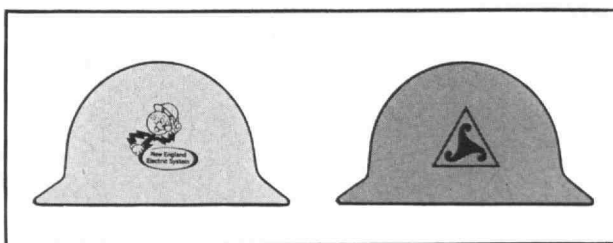


## FOUR "FIRSTS" AT BRAYTON POINT

Stone & Webster Engineering Corporation, working closely with the client's own engineering department, recently completed the design and construction of Units 1 and 2 of

New England Electric System's Brayton Point Station at Somerset, Massachusetts. Fueled by coal delivered by sea-going collier, each unit has a capability of 250,000 kw.

Innovations in the project's design included direct



coupling of main boiler feed pumps to generator shafts, 6-hour coal storage silos, full electronic combustion controls, and flash evaporators to allow use of make-up water from the sea.

Throughout the project, New England Electric System and Stone & Webster were able to operate as a single organization. This cooperation was a major factor in the rapid and economical completion of the station.

1889 1964 75th ANNIVERSARY



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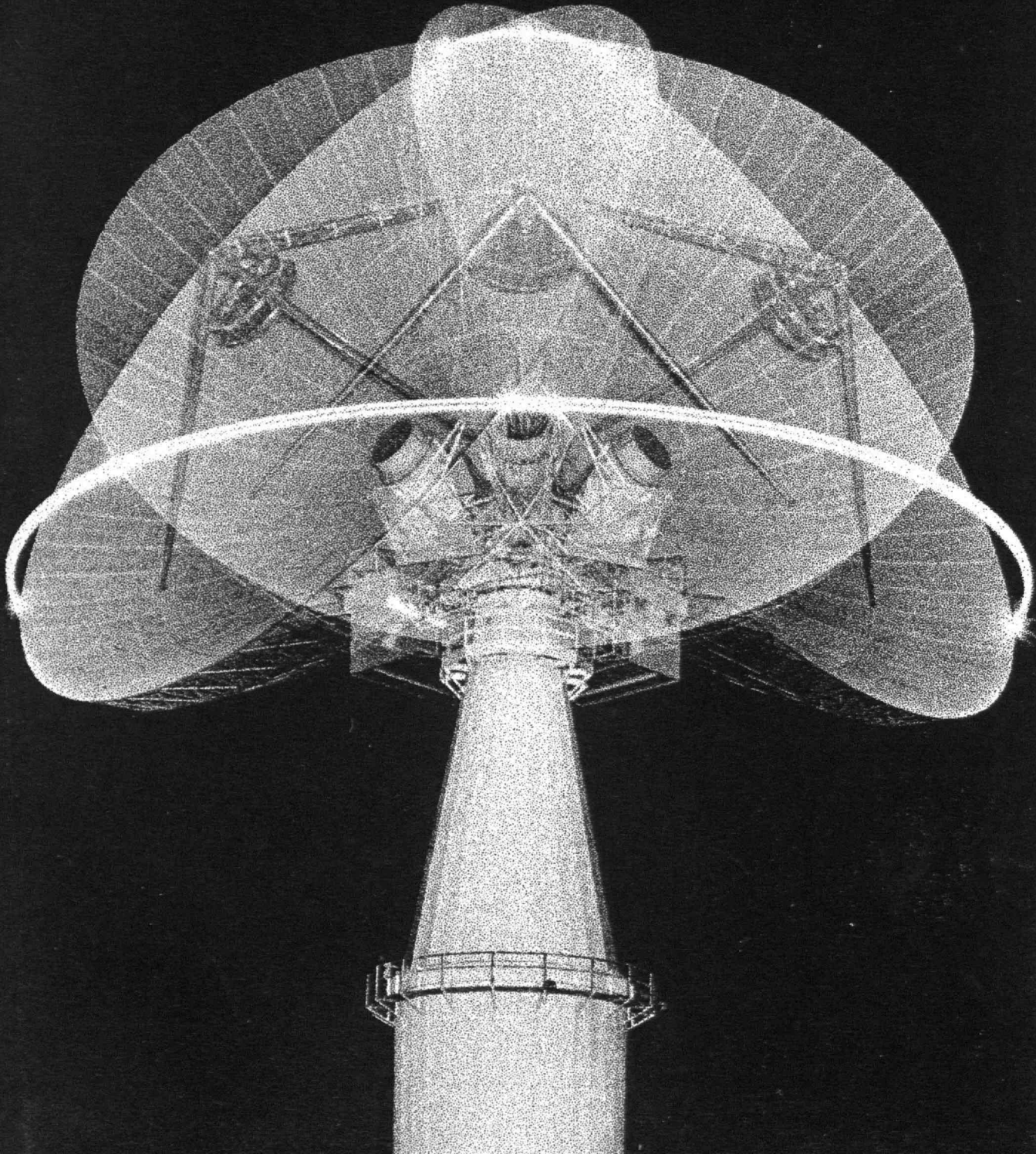
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Lincoln Laboratory of the Massachusetts Institute of Technology conducts research and development in advanced electronics, with emphasis on applications to national defense and space exploration. The *Radar Design* research program includes investigations of high-power production and low-noise receivers, signal design studies, and the development of large-aperture, adaptive antennas. All qualified applicants will receive consideration for employment without regard to race, creed, color or national origin. Lincoln Laboratory, Massachusetts Institute of Technology, Box 28, Lexington 73, Massachusetts.

Solid State Physics  
Information Processing  
Radio Physics and Astronomy  
Radar Design  
Control Systems  
Space Surveillance Techniques  
Re-entry Physics  
Space Communications  
A description of the Laboratory's work will be sent upon request.



# Technology Review

Reg. U.S. Patent Office

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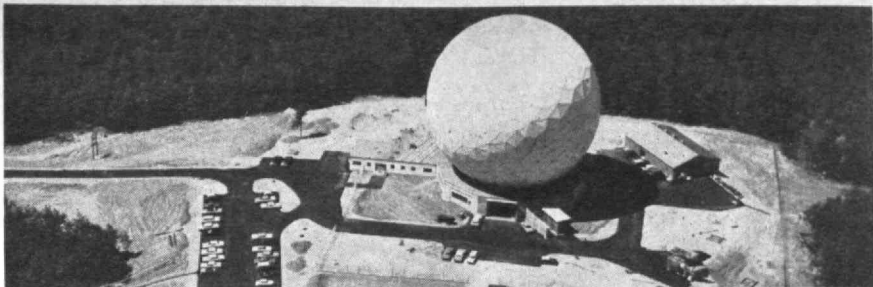
Officers of the Alumni Association of M.I.T. are: *Donald F. Carpenter*, '22, President; *Donald P. Severance*, '38, Executive Vice-president; *Samuel A. Groves*, '34, and *Philip H. Peters*, '37, Vice-presidents; *Fredrick G. Lehmann*, '51, Secretary; *Thomas P. Pitre*, Director for Clubs; *H. B. Kane*, '24, Director of the Alumni Fund; *Douglas F. G. Haven*, '52, Regional Director of the Alumni Fund; and *Kenneth S. Brock*, '48, Director for Special Gifts of the Alumni Fund.

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NOVEMBER, 1964



The cover shows the Haystack antenna in this radome (see p. 31).

## The Nature of Man

THIS MONTH, *The Review* features the gist of six lectures given at the second annual M.I.T. Alumni Seminar in response to two questions: *What are man's resources of intellect and power? How much do we know of ourselves and our universe? The topics and authors follow:*

### Man Looks at the Infinite, by HARLOW SHAPLEY 17

We have yet to strike bottom in the billion-starred Metagalaxy, and some formerly accepted astrophysical theory is now in serious trouble.

### Man Looks at the Infinitesimal, by DAVID H. FRISCH, '47 19

In putting the strange animals in the elementary particle zoo into some phylogenetic order, men have had to stretch their imaginations.

### The Science of Culture, by SIDNEY W. MINTZ 23

An historically perpetuated system leads some people to revere and yet kill bears, and others to revere and yet be killed by automobiles.

### The Individual in Society, by RICHARD M. DOUGLAS 25

The idea of individual uniqueness originated in small communities; Western Science and literature owe much to "new men."

### Computers and Study of the Brain, by WALTER A. ROSENBLITH 27

Let man leave bookkeeping to machines, and concentrate on understanding the workings of his own brain.

### Science and the Human Spirit, by HUSTON SMITH 29

Science cannot make us believe in God, but an understanding of science can keep us from making an idol of it.

## News of the M.I.T. Community

### The Trend of Affairs 31

A new antenna, a new class, and other developments.

### Alumni Officers Return to School 35

They plan their Association's 10th and decisive decade.

### The Alumni Fund Looks Ahead 37

Its goal this year is \$1,500,000 from 20,000 contributors.

### In Recognition of Great Service 39

Eleven Alumni are honored at the Institute with bronze beavers.

### The Negro at the College Door 43

A former student discusses a current national problem.

### Individuals Noteworthy 4 Institute Yesteryears 50

### New Books 46 Feedback 54



## Individuals Noteworthy

### Corporation Members

WILLIAM WEBSTER, '23, and *Russell DeYoung*, '40, have been elected life members of the M.I.T. Corporation. Mr. Webster is chairman and chief executive officer of the New England Electric System, and Mr. DeYoung is chairman of the board of the Goodyear Tire and Rubber Company. Both men have master's degrees from M.I.T., Mr. Webster having been graduated from the Naval Academy in 1920 and Mr. DeYoung from Akron University in 1932, and both men have been special term members of the Corporation since 1959.

Five others were elected to five-year term memberships at the Corporation's June meeting. They are:

*Eugene McDermott*, of Dallas, who is chairman of the Executive Committee of Texas Instruments Incorporated and has been a special term member of the Corporation since 1963. He received an M.E. degree from Stevens Institute of Technology in 1919 and an A.M. degree from Columbia University in 1925.

*Ivan A. Getting*, '33, of Los Angeles, who is president of Aerospace Corporation, and has been an alumni term member of the Corporation since 1963. He received a D.Phil. degree from Oxford University in England in 1935.

*Emilio G. Collado*, '31, of New York, who is vice-president and a

director of Standard Oil Company (New Jersey). He received A.M. and Ph.D. degrees from Harvard University.

*M. Wren Gabel*, '39, of Rochester, who is executive vice-president and a director of Eastman Kodak Company. He came to M.I.T. as a Sloan Fellow after being graduated from the University of Kansas.

*Samuel A. Groves*, '34, of Wellesley Hills, Mass., who is president and chairman of the Executive Committee of United-Carr Incorporated. He received an A.B. degree from Dartmouth before attending M.I.T.

### Robert E. Wilson: 1893-1964

A LIFE MEMBER of the M.I.T. Corporation, Robert E. Wilson, '16, died in Geneva, Switzerland, on September 1 while attending a Conference on Peaceful Uses of Atomic Energy as an adviser to the U.S. delegation. He was chairman of the Board of the Standard Oil Company of Indiana when he retired in 1958, and subsequently was a member of the Atomic Energy Commission.

Dr. Wilson was born in Beaver Falls, Pa., and before entering M.I.T. he was graduated from the College of Wooster in Ohio, where his father was professor of mathematics. He served as a major in World War I, and returned to the Institute to teach in 1919. He became director of the Research Lab-

oratory of Applied Chemistry in 1920, and helped both to set the pattern for research in the chemical and petroleum industries and to establish chemical engineering as a field for specialization.

He joined Standard Oil (Indiana) in 1922 as assistant director of research at its Whiting, Ind., refinery, and rose through the years to become the company's chief executive officer. He was chairman of the Petroleum Industry Committee on Petroleum Economics during World War II, and led his company in its postwar expansion period.

Dr. Wilson held 90 patents, received several medals for his contributions to chemical engineering, and was given honorary degrees by more than a dozen institutions. He was a director of the Chase Manhattan Bank of New York and the First National Bank of Chicago and served the College of Wooster as chairman of its Board of Trustees. He was elected an alumni term member of the M.I.T. Corporation in 1941 and a life member in 1946.

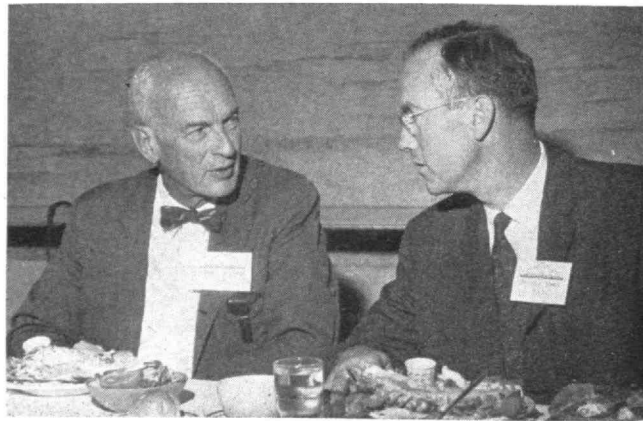
He was a member of the National Academy of Sciences and the American Philosophical Society and a Fellow of the Royal Society of Arts (England). He also was a trustee of the University of Chicago, the Museum of Science and Industry at Chicago, and the Carnegie Institution; Honorary Vice-president of the National Association of Manufacturers; and a director of the American Petroleum Institute.

His home at the time of his death was in Washington, D.C., and he is survived by his wife and three daughters.

(Continued on page 6)



*Samuel A. Groves*, '34 (left), with President *Julius A. Stratton*, '23, at the Alumni Officers' Conference (reported on page 35), of which Mr. Groves was chairman.



*Donald F. Carpenter*, '22 (left), Alumni Association President, with Provost *Charles H. Townes* at the alumni leaders' dinner in the Walker building.

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## Individuals Noteworthy

(Continued from page 4)

### An Astronomer Abroad

ALAN H. BARRETT, Associate Professor of Electrical Engineering, proceeded to the U.S.S.R. from the International Astronomical Union's meeting in Hamburg this summer, for a three-month visit under terms of an agreement between the Soviet Academy of Sciences and the U.S. National Academy of Sciences.

Professor Barrett helped design the U.S. Mariner II investigation of the temperature of Venus and was a member of the Lincoln Laboratory group that made the first radio observations of the oxygen-hydrogen radical (OH) in space.

In the U.S.S.R. he hoped to spend several weeks at the Lebedev Physics Institute in Moscow and at its radio astronomy field station at Serpukhov, which has a 70-foot radio telescope. He also hoped to visit observatories in Leningrad, Abastuman, Byurakan, Pulkovo, and Simeiz and meet with Russian radio astronomers planning observations at the OH molecule wavelength.

### Professorial Newsmakers

JOHN WULFF, Class of 1922 Professor of Metallurgy, was chosen to receive the 1965 Albert Easton White Distinguished Teacher Award by the American Society of Metals.

Arthur C. Cope, Professor and Head of the Department of Chemistry, was the winner of the American Chemical Society's \$5,000 Roger Adams Award in Organic Chemistry.

Clyde M. Adams, Jr., '49, Professor of Metallurgy, was appointed to the American Brake Shoe Professorship at M.I.T. this year. The professorship, established in 1955, was originally held by the late Professor Howard F. Taylor, '46.

Winston R. Markey, '51, Associate Professor of Aeronautics and Astronautics, has become chief scientist of the U.S. Air Force.

Michael Athans of Lincoln Laboratory, who received the first Donald P. Eckman Award of the American Automatic Control Council, has been appointed assistant professor of electrical engineering at M.I.T. He is also a Ford Post-Doctoral Fellow.

### Visiting Professor

THIS YEAR'S Jerome Clarke Hunsaker Professor of Aeronautical Engineering is Abraham Hyatt, former director of Plans and Program Evaluation for the National Aeronautics and Space Administration.

Born in Russia, Mr. Hyatt came to the U.S. in 1921, was graduated from the Georgia Institute of Technology, served in the Marine Corps from 1944 to 1946, and has been honored both for his wartime service and his work on vertically rising aircraft and high-energy fuels.

He was a stress engineer with the Glenn L. Martin Company for several years and chief structural engineer with the McDonnell Aircraft Corporation from 1939 to 1944. He joined the Bureau of Aeronautics of the Navy in 1946 and was its chief scientist when assigned to the space agency in 1958. He served on the President's Science Advisory Committee on high-altitude detection in 1959, is a member of the Department of Defense advisory panel on aeronautics, and has been a member of numerous other advisory boards.

(Continued on page 8)

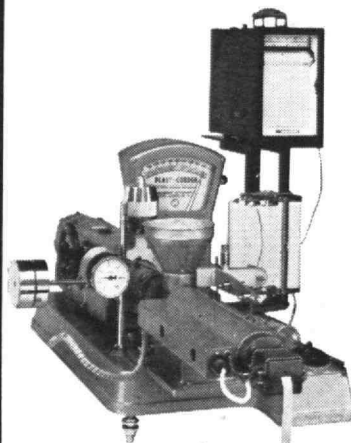
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## Is it possible that a leading maker of jet engine turbine blades had a hand in giving Pat Deegan a fresh sandwich today that was made last night?

It's perfectly logical to assume that the nation's leading producer of alloying metals like chromium, manganese, tungsten, and vanadium could become an expert on their use in new forms of steel. One result is the development of a new kind of stronger stainless steel.

Nor would it be surprising that the nation's pioneer and leading producer of plastic raw materials would be selling plastic food bags with a new kind of fold-lock top that locks in freshness. They're called "Glad" Bags, and they keep Pat Deegan's lunch fresh even though it was packed the night before.

But you'd have every reason to doubt that two such unlike activities could come from the same company. Provided you didn't know about Union Carbide.

In fact, you'll come across lots of diversifi-

cations at Union Carbide. It's one of the world's largest producers of chemicals, and it makes ingredients for textiles, paint, and urethane foam for cushioning. It is one of the most diversified private enterprises in the field of atomic energy. As a world authority in super-cold fluids, it produces tons of liquefied hydrogen, oxygen, and nitrogen for fueling space vehicles. It's a leader in carbon products and makes exhaust nozzle liners for rockets, brushes for electric motors, and electrodes for electric arc furnaces. And its consumer products include world-leading "Prestone" anti-freeze.

In fact, few other corporations are so deeply involved in so many different skills and activities that will affect the technical and production capabilities of our next century.

The next century starts with Pat Deegan's lunch.

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(Continued from page 6)

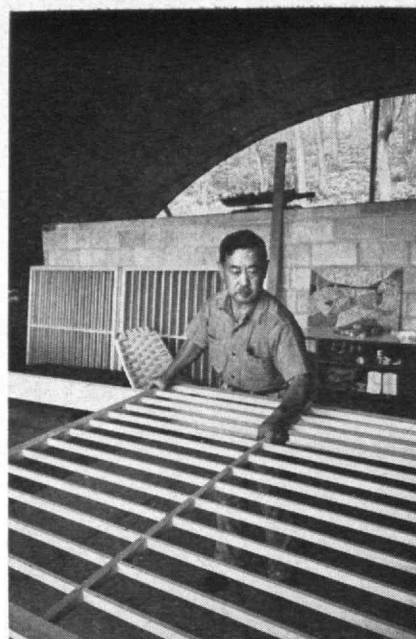
### Honors to Alumni

RECIPIENTS of recent awards and similar distinctions have included:

The late *Robert E. Wilson*, '16, and *Earl R. Thomas*, '22, respectively, the Award to Executives and the Award of Merit by the American Society for Testing and Materials . . . *Roderick K. Eskew*, '21, the Rohland A. Isker Award by Research and Development Associates, Inc. . . . *Hood Worthington*, '24, a Citation for Outstanding Service by the Atomic Energy Commission;

*John R. Newell*, '34, an honorary Doctor of Laws degree by Bowdoin College . . . *Harry M. Weese*, '38, the Arnold W. Brunner Prize by the National Institute of Arts and Letters;

*Walter A. Netsch, Jr.*, '43, Partner, Skidmore, Owings and Merrill, the R. S. Reynolds Memorial Award by the American Institute of Architects . . . *T. William Lambe*, '44, and *Ross E. McKinney*, '49, respectively, the Norman Medal and the Rudolf Hering Medal by the American



Photos from Medical World News

*GEORGE NAKASHIMA*, '30, built a 40-by-40-foot Japanese teahouse at his home in New Hope, Pa., which was set up in San Francisco to entertain delegates to this year's American Medical Association convention. Traditional ceremonies were performed in the structure, which was completely furnished with accouterments including four variegated gardens.

can Society of Civil Engineers . . . *Major General John F. Thorlin*, '48, an honorary Doctor of Laws degree

by New Mexico State University;

*Wilbert E. Chope*, '49, the Distinguished Achievement Award by Pi Kappa Alpha Fraternity . . . *Aaron L. Brody*, '51, the Industrial Achievement Award by the Institute of Food Technologists.

(Continued on page 10)

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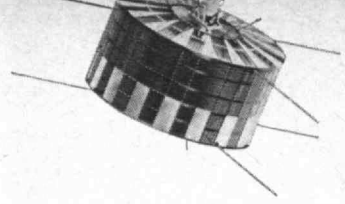
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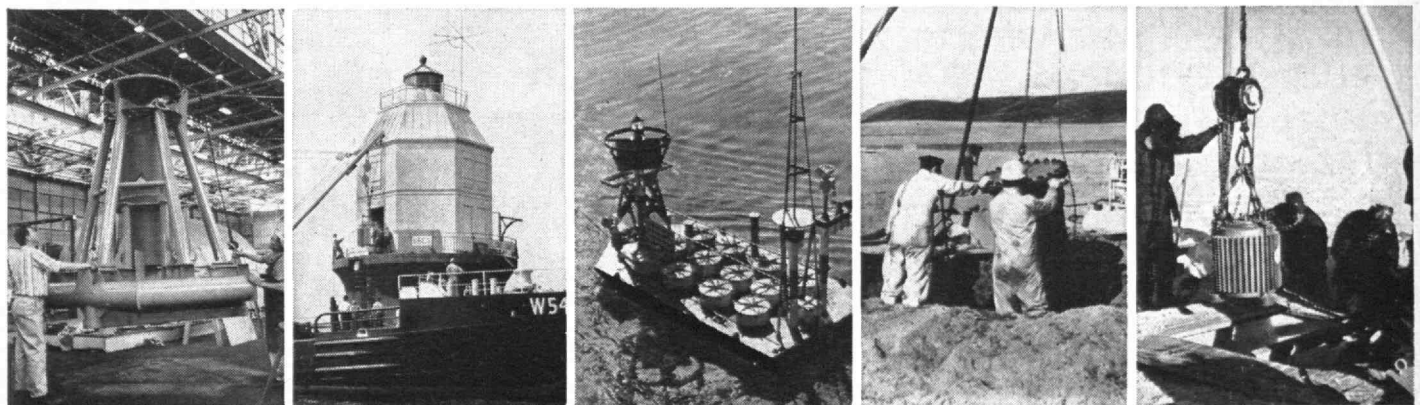
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## Individuals Noteworthy

(Continued from page 8)

### New Posts

NAMED in the news of promotions, elections, and appointments recently were:

*Crawford H. Greenewalt*, '22, as a Director, The Boeing Company . . . *Duncan A. Crawford*, '26, as Vice-president, Stone and Webster Service Corporation;

*William J. Rudge, Jr.*, '27, as Manager—Engineering, Distribution Protective Equipment Department, General Electric Company . . . *Norman L. McClintock*, '29, as Vice-president, Metropolitan Life Insurance Company . . . *Edward J. Nolan*, '30, and *John F. Mahoney*, '38, respectively, as Director of Chemical Control, and as Director of Product Development and Service Laboratories, Merck and Company, Inc.;

*John A. Fellows*, '32, as President, American Society for Metals . . . *Dr. John J. Hanlon*, '33, as Health Director, Detroit-Wayne County, Mich. . . . *Hollinshead T. Martin*, '33, as Vice-president—

Purchasing, Signode Corporation;

*Arthur L. Conn*, '34, as Senior Consulting Engineer, Research and Development, American Oil Company . . . *John A. Hrones*, '34, as Provost, Case Institute of Technology . . . *Charles W. Jerome*, '34, as Manager, Test and Measurement Department, Lighting Products Division, Sylvania Electric Products, Inc.;

*Peter Kalustian*, '34, as Director of Special Products, Drew Foods Division, Drew Chemical Corporation . . . *Bernard B. Berger*, '35, as Director, Northeastern Water Laboratory, U. S. Public Health Service . . . *Karl A. Gelpke*, '36, as Technical Director, Fiber Products Division, The Kendall Company;

*Francis H. Lessard*, '36, as Assistant Manager of Sales, Bethlehem Steel Company . . . *Daniel J. O'Connor, Jr.*, '37, as Executive Vice-president, American Cyanamid Company . . . *Joseph A. Smedile*, '37, as Vice-president, Material Service, General Dynamics Corporation;

*Reeves Morrisson*, '38, as Assistant to the Vice-president, United

Aircraft Corporation . . . *Arthur N. Tingley*, '38, as Vice-president—Technical Service and Development, Madison Throwing Company . . . *John W. Pocock*, '39, as a Director, Booz, Allen and Hamilton, Inc.;

*Norman H. Taylor*, '39, as Special Technical Adviser to the President, Control Data . . . *Russell L. Haden, Jr.*, '40, as President, Ionics, Inc. . . . *J. Herbert Hollomon*, '40, and *Abraham Katz*, '50, respectively, as Personal Representative to the Secretary of Commerce, and as Project Manager, U. S. Department of Commerce;

*William P. Cadogan*, '41, as Corporate Vice-president—Research, Emhart Corporation . . . *Alvin H. Hartman*, '41, as a Member, Executive Committee, National Association of Small Business Investment Companies . . . *Robert R. Porter*, '41, as President, Boss Mfg. Co.;

*Robert G. Breckenridge*, '42, as Director, Physics Research Program, Atomics International, North American Aviation, Inc. . . . *Curtis D. Buford*, '42, as Executive

(Continued on page 12)

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## Individuals Noteworthy

(Continued from page 10)

Vice-president, Pittsburgh and Lake Erie Railroad;

*Arnold M. Varner*, '47, as Director of Research, Whiting Machine Works . . . *Albert H. Bryan, Jr.*, '48, as Manager, Raytheon Company, Huntsville, Ala. . . . *George N. Fountas*, '48, as Vice-president—Research, Chemical Products Corporation;

*Albert J. Kelley*, '48, as Deputy Director, Electronic Research Center, National Aeronautics and Space Administration, Boston Area . . . *Richard T. Krueger*, '48, as Production Superintendent, Eastern Chemical Division, Hooker Chemical Corporation . . . *Lyndon Welch*, '48, as President, Eberle M. Smith Associates, Inc.;

*Jesse C. Clamp, Jr.*, '49, as President, Industrial Development Research Council . . . *David K. Hardin*, '49, as Chairman of the Board, Chicago Business Industrial Project . . . *Erskine N. White, Jr.*, '49, as Executive Vice-president, Gorham Corporation;

*Emmett H. Bradley*, '50, as Vice-

president, Atlantic Research Corporation . . . *David E. Webster*, '50, as Executive Vice-president, Beneke Corporation . . . *William H. Gable*, '51, as Vice-president—Engineering, Aircraft Armaments, Inc.;

*J. Donald Silberman*, '51, as Executive Vice-president, Petroleum Evaluation and Management Company, Inc. . . . *Arnold H. Glaser*, '52, as Corporate Vice-president, Allied Research Associates, Inc. . . . *Robert F. King*, '52, as Market Development Representative, Cast Nylon Department, Polychem Division, The Budd Company;

*Orville D. Page*, '52, as Manager—Engineering, Vitro Electronics . . . *Sheldon G. Thorpe*, '52, as Director of Quality Control, Baxter Laboratories, Inc. . . . *John R. Schrieffer*, '53, as Mary Amanda Wood Professor of Physics, University of Pennsylvania;

*Richard J. Kruizenga*, '56, as Coordinator—Long Range Planning, Humble Oil and Refining Company . . . *Hugh E. Witt*, '57, as President, Armed Forces Management Association . . . *Earl S. Rose, Jr.*,

'58, as Manager—Production Planning, Ocean Spray Cranberries, Inc. . . . *Calvin A. Campbell, Jr.*, '59, as Planning and Supply Co-ordinator, Chemical Raw Materials Department, Chemical Division, Enjay Chemical Company.

## Serving the Institute

DAVID J. TOBIN, '46, became Institute Secretary for Foundations and assumed responsibility at M.I.T. this fall for soliciting gifts and grants from foundations. He was formerly with the National Research Corporation and more recently was vice-president and secretary of the General Vacuum Corporation.

## New Liaison Officer

RICHARD G. BROWN, '61, has replaced *Thomas Yonker*, '56, in the Industrial Liaison Office at M.I.T. Mr. Brown received a B.A. degree from Ripon College at the same time that he received his S.B. in Mechanical Engineering at M.I.T., and was a development engineer with Pratt and Whitney Aircraft for three years.

(Concluded on page 14)

# albert

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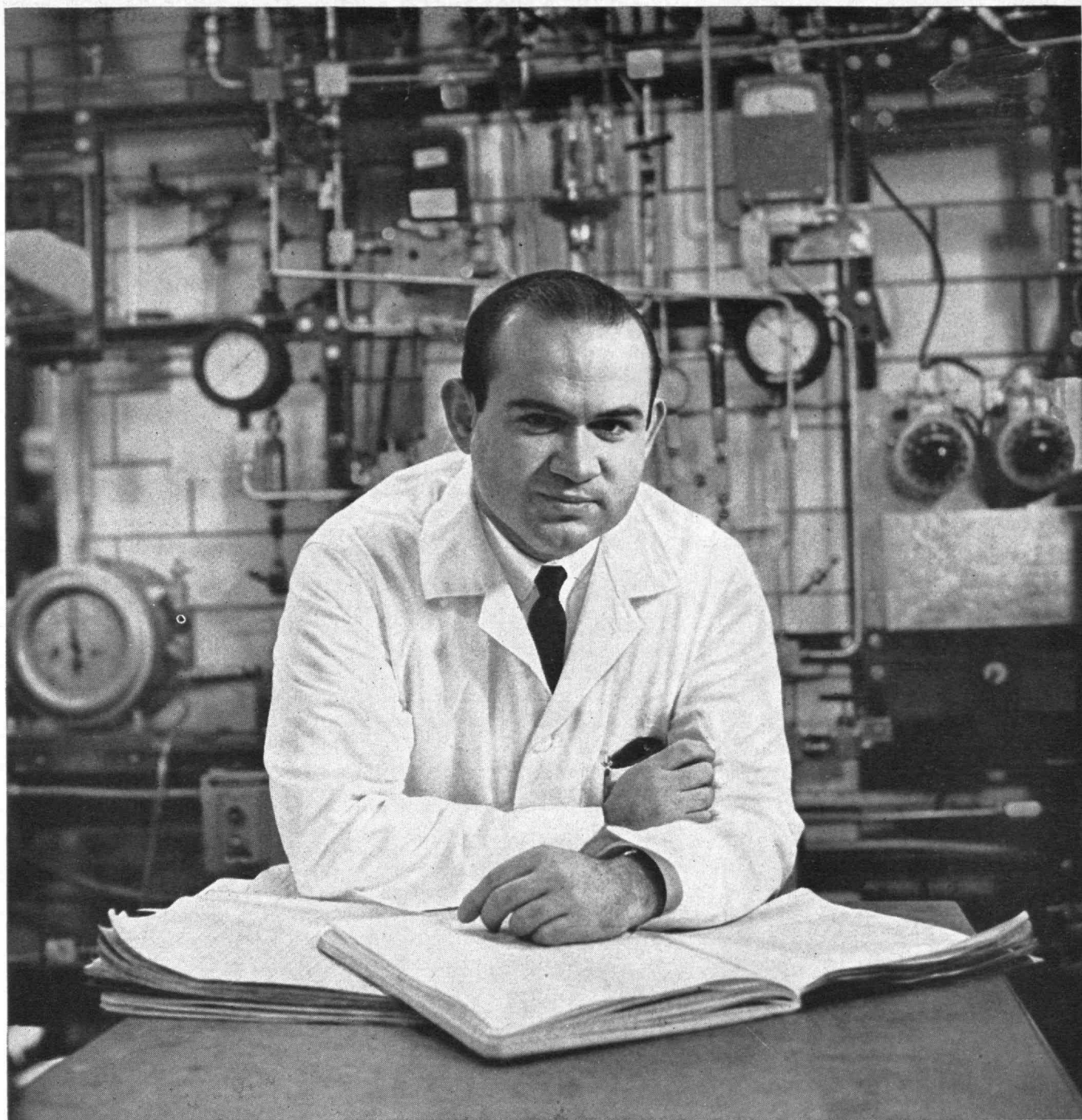
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## Individuals Noteworthy

(Concluded from page 12)

### George Manning: 1892-1964

PROFESSOR EMERITUS George C. Manning, '20, died on September 19. He was acting head of the Department of Naval Architecture and Marine Engineering at M.I.T. from 1950 to 1952.

Professor Manning was the author of several books, the inventor of a submarine salvage pontoon, and for six years the supervising inspector of naval matériel for the Boston Naval District.

Born in Washington, D.C., and graduated from the U.S. Naval Academy in 1914, he was superintendent of ship design at the Naval Station in New Orleans before coming to the Institute. He was a member of the Faculty from 1936 to 1939, and from 1941 until he retired in 1958. He also taught at the U.S. Naval Postgraduate School and King's College, University of Durham (England), and helped to establish and direct the department of naval architecture at the University of Sao Paulo in Brazil. His wife and three sons survive him.

### Richard D. Fay: 1891-1964

A PROMINENT YACHTSMAN and M.I.T. professor emeritus, Richard D. Fay, '17, died last September 9 after a long illness.

Professor Fay was born in Boston and received S.B. degrees jointly from Harvard and M.I.T. After service in the Navy, he became a research associate in electrical communications at the Institute in 1928, assistant professor in 1930, and associate professor in 1934.

During both World Wars he did important work in underwater sound. He was navigator of the *Yankee*, candidate for defense of the America's Cup in 1934, and was active in the Acoustical Society of America, of which he became vice-president.

Professor Fay is survived by his wife, two daughters, one son, two brothers, and two sisters.

### Henry K. Dow: 1901-1964

M.I.T.'s Director of Housing, Henry K. Dow, died last July 29 after 22 years of service at the Institute. A native of Newton and a Bowdoin College graduate, he was formerly assistant manager of the Hotel Manger in

Boston and with the Fred Harvey restaurant chain in Oklahoma.

Mr. Dow was secretary of the National Association of Educational Buyers and a member of the Nominating Committee of the American College and University Housing Officers' organization.

He is survived by his wife, two daughters, a son, and two grandchildren.

### Lois Lilley Howe: 1864-1964

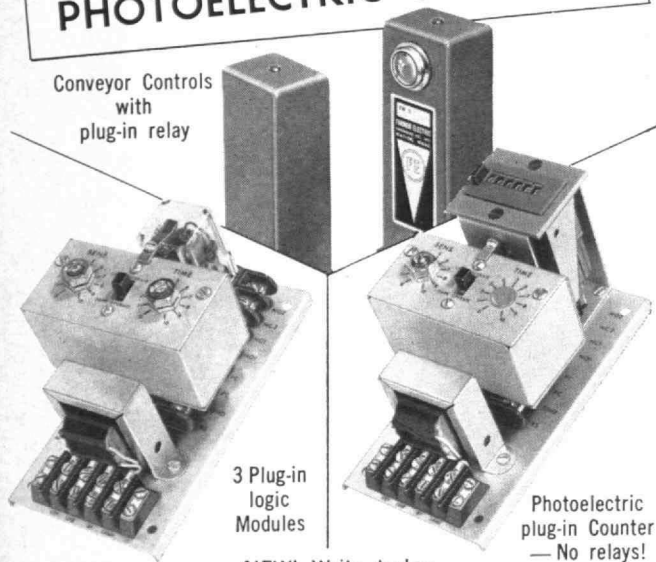
M.I.T.'s oldest Alumna, Miss Lois Lilley Howe, '90, died at her home in Cambridge on September 13. Miss Howe recalled in an article in *The Technology Review* (December, 1963, page 21) that she was the only girl in a class of 65 boys. She later specialized in reconstruction and colonial design.

### S. K. Johnson: 1886-1964

THE athletic trainer at M.I.T. for more than 40 years, Sanfrid K. Johnson, died in August in Roswell, N.M. "Doc" Johnson was born in Sweden and was a medical masseur for many years. He is survived by his wife; one son, Stanley T., '36; and two daughters.

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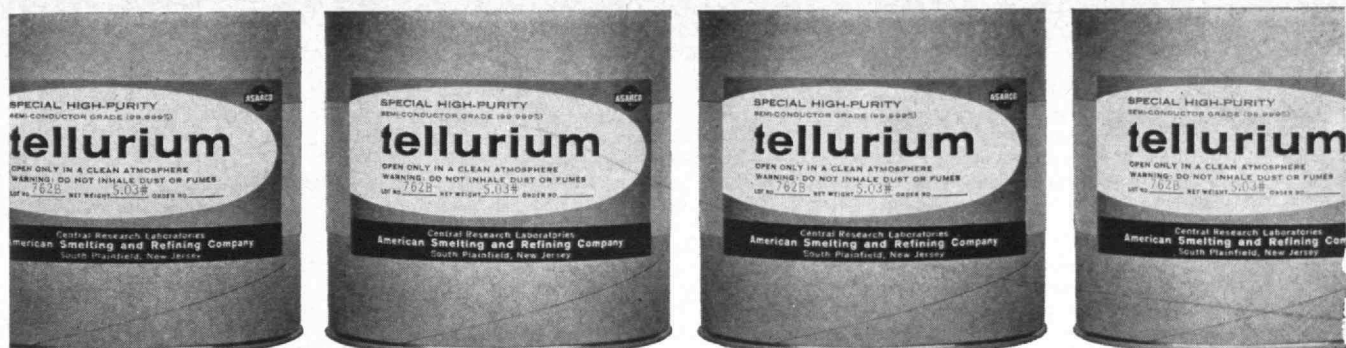
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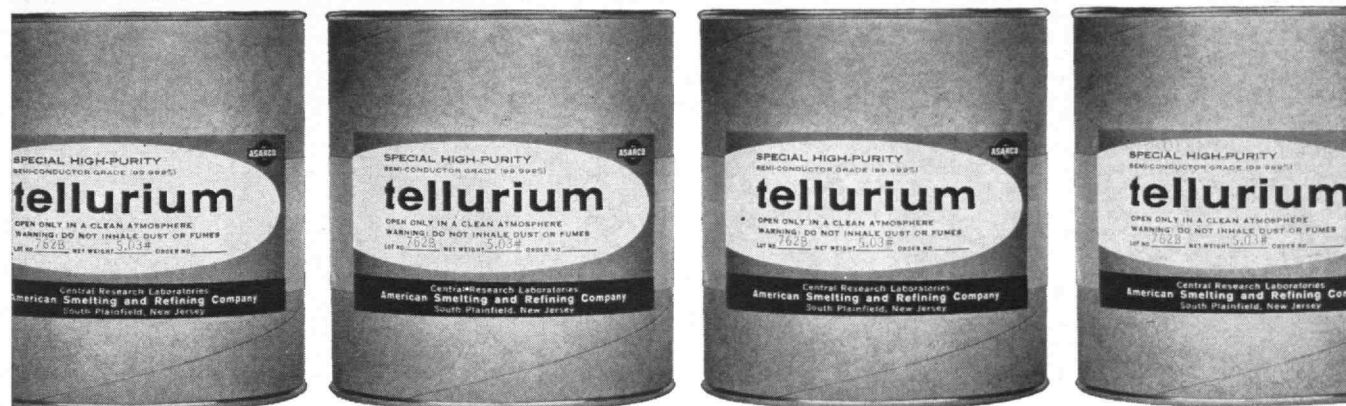
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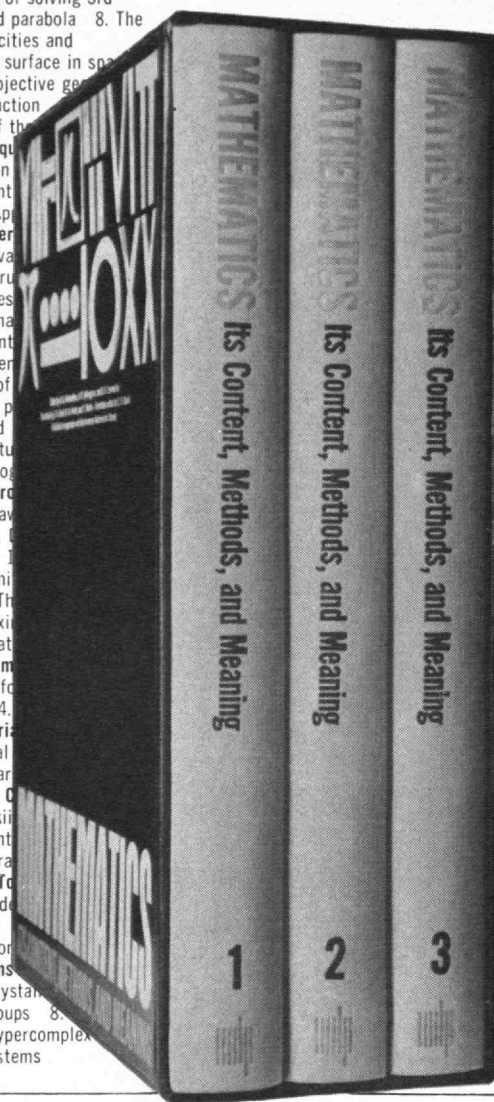
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**The Nature of Man** was the subject of an M.I.T. Alumni Seminar in September arranged by a committee headed by Dean Emeritus George R. Harrison. Lecture sessions conducted by Professors Morris Cohen, '33, Peter Elias, '44, and Isadore Amdur dealt with topics: *Man and His Universe*, *The Mind of Man*, and *Man and Society*.

**"Awareness"** was the word that ran throughout the seminar, James R. Killian, Jr., '26, noted during the discussion of *Man's New Responsibilities* at the closing session. Beginning on this page is the first of a series of papers prepared by the seminar's teachers to permit The Review's readers to share that awareness of the world today.

# Man Looks at the Infinite

*Does the Metagalaxy have an edge and center?  
Nobody is certain what is going on out there*

BY HARLOW SHAPLEY

*INTRODUCED as "the first citizen of the universe," Professor Harlow Shapley led his audience at this year's M.I.T. Alumni Seminar out into space at the speed of light, with observations such as these:*

**A**N ENGINEERING SOCIETY in England asked Sir Arthur Eddington, the great cosmogonist, to address the annual meeting on "The End of the World." "Which end?" asked Sir Arthur. I am asked to speak on matters infinite. Do you mean infinitely big (star organizations), or infinitely small (atoms and such)? Infinitely brief (lifetime of pi-meson), or infinite in duration?

However we take the assignment, large numbers will be involved. To attain clarity let us remind ourselves of exponential arithmetic and say that  $10^6$  is a good way of saying a million; also that  $10^{-6}$  is a millionth:

$10^{24}$  is shorthand for a million, million, million, million (1 followed by 24 zeros),

$2.5 \times 10^{13}$  is the distance to the nearest star in miles,

$3 \times 10^{10}$  centimeters a second is the velocity of light,

$1.2 \times 10^{24}$  is the number of corpuscles (electrons and protons) per gram of matter,

$2 \times 10^{33}$  grams is the mass of the sun,

$6 \times 10^{21}$  metric tons of matter is in the earth, and

$10^{-30}$  grams per cubic centimeter is approximately the density of matter in space.

And here are some other elementary statements:

► The earth is a planet of great moment to M.I.T. Alumni but negligible in the universe.

► The earth annually circles the sun, which is in most respects a remarkably average star. The sun gravitationally controls a system of nine helpless major planets, and hundreds of minor planets.

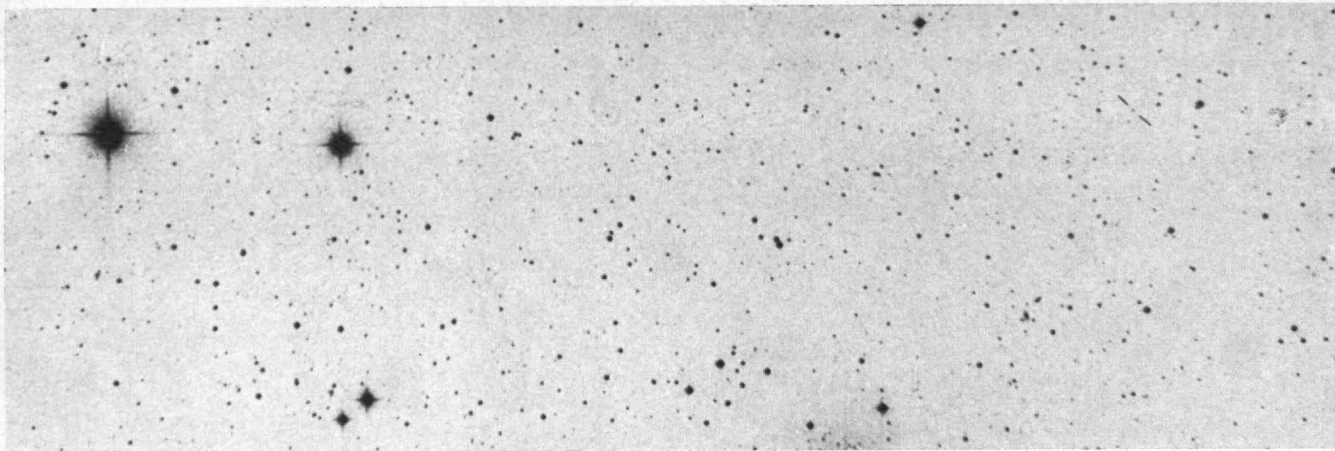
► Our sun-star is a helpless member of a galaxy of stars, which in turn is controlled by a higher organization that I call the Metagalaxy.

There are those among the dreamers who wonder loosely if our whole billion starred Metagalaxy is not merely a single unit in a still higher system. And while we are dreaming of such things why not wonder also in the direction of the minutely minute and suggest that our electrons and protons may be mighty galaxies in a lower system. Nonsense? Certainly nonsense, but why not?

Let us turn to Sense and talk and think about stars—those radiant spheres of gas that baffle both poets and philosophers. The nearby star, the sun, is very commonplace. It is average in size, in color, in chemical structure, in surface temperature, and in motions. It is neither a giant like Betelgeuse nor a dwarf like the companion to Sirius. In candle power the sun is fainter than most of the naked-eye stars, but brighter than most of the telescopic stars. It is rather old as stars go, but there are billions much older.

We are inclined to suggest the sun's age as  $10^{10}$  years and consider the crust of the earth only half as old, that is, five billion years.

Spectrum analysis shows that the surface atmosphere of the sun contains practically all of the chemical elements that are found in the atmosphere and crust of the earth. That is logical, for if our theories can be trusted, the sun, along with the planets, satellites, asteroids, comets, and meteors, emerged from the proto-solar nebula with a common ancestry. Hydrogen was the dominant element then as now—in fact, we now believe that more than 99 per cent of the sun is hydrogen and helium, the two lightest elements. The earth's atmosphere has lost most of its hydrogen through having too little mass. Massive Jupiter could retain its fast moving hydrogen and helium atoms. So could Saturn, and our study of its atmosphere shows the dominance there of hydrogen; it has a deep hydrogen atmosphere, poisoned with methane and ammonia.



Between straight lines at upper right in this Harvard Observatory photo, you see an object that is probably a quasar.

Back to infinite matters—to the numbers of stars, for instance. To the human eye only two or three thousand stars are visible at one time, but a small telescope will reveal a million. A thousand times as many are shown by a sizable telescope working photographically. Through sampling, star counting, and studying the motions of stars in various parts of the Milky Way, we are led to  $10^{11}$  as a conservative estimate of the number of stars in our Milky Way galaxy. And ours is just one galaxy among multimillions.

Forty years ago we finally decided that the spiral and spheroidal “nebulae” are in truth highly populous galaxies. Ours is a giant. The population of stars is estimated to be  $10^{10}$  in an average galaxy. Are there many such organizations? We sample the depths of the sky with the big photographic telescopes and come to the conservative figure  $10^{10}$  for the total number of galaxies within our reach.

To get the total number of stars in the universe we add the exponents and get  $10^{20}$ —one followed by 20 zeros. I am too conservative; those numbers should probably be increased by a factor of 10. There are indeed plenty of stars!

You are all acquainted with the Big Dipper constellation. The bowl of the dipper covers about 35 square degrees of the sky—nearly a tenth of 1 per cent. With the unaided eye you can see few stars and no galaxies in the bowl. But it is well populated all right! The Harvard galaxy catalogues of this region were made with a 16-inch large field refractor and show in the bowl more than 1,500 individual galaxies, all below the visual limit. The great Hale reflector on Mount Palomar, if pushed to its photographic limit, could show more than a million times as many!

There are many astonishing things that could be told about galaxies. I shall mention five of them:

1) With all of our reaching toward the boundary of the perceivable universe, we have not struck bottom. We have as yet no convincing evidence that we have approached either an edge or the center of the Metagalaxy. Perhaps the Metagalaxy has no edge or center!

2) Researches on the star-cluster distribution in and near our Milky Way led us some years ago to an as-

tonishing conclusion: namely, that we are peripheral in our giant galaxy. We had long accepted the geocentric arrangement of the stellar universe. The earth is the center, we said. But the Copernican Revolution some four centuries ago overthrew the geocentric theory through showing that the earth is not the center—the sun is the center.

But in the second decade of this century that interpretation had to be dropped also, for the star clusters said that we are far off-center, about 25,000 light-years—that is, 150,000,000,000,000 miles! Humiliating?

3) The galaxies are scattering. The red shifts in their spectra reveal the astonishing fact that the farther away from the observer a galaxy is the faster it recedes. Why this behavior? As yet we do not know, but some speculators would tie the expanding universe to the hypothetical Big-Bang that was the origin of origins when the hypothetical all-inclusive primeval “atom” exploded.

4) In the past couple of years astronomers have uncovered an unsettling situation among the distant galaxies. A number of faint objects have been found to have a tremendous speed of recession. Red shifts in the spectra revealed this motion. The blue region of such a galaxy is shifted into the green-yellow; the green into the orange-red. The distance of these “Quasars” is enormous. Their absolute magnitudes (candle powers) appear to be equivalent to that of 100 ordinary galaxies. What is going on? For one thing, some formerly accepted astrophysical theory is in serious trouble. How could a quasar form in the first place, and contract into the superlatively high density that these queer objects appear to have?

5) Finally I point to another contribution from the Metagalaxy. Philosophy and religion are both touched by the recent revelations contributed by way of telescope and microscope; by cosmogony and quantum analysis; by light-year and cosmic ray; infinitesimal and super-infinite  $10^x$  times  $10^{-x}$ .

Solve that last problem and we get  $10^0$ , that is, we get NOW in Time and HERE in Space.

We are back at our starting place.



# Man Looks at the Infinitesimal

*Some of the surprises that intrigue physicists are indicated with the help of familiar objects*

BY DAVID H. FRISCH, '47

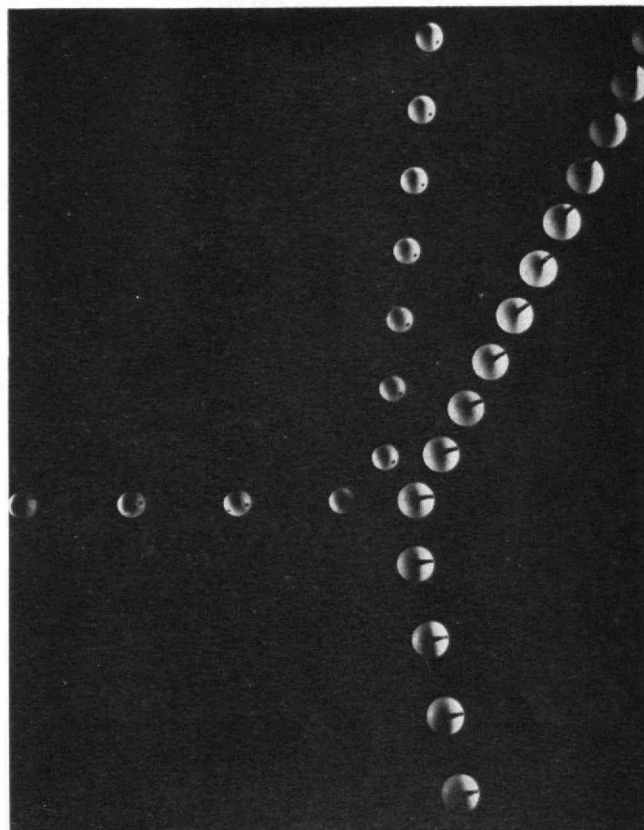
WHILE speculations about "the infinitesimal" can be traced back through several millenia of recorded history, quantitative experiments and theories about the substructure of what we perceive with our unaided senses have been made only in the last few centuries. Indeed, an understanding of electromagnetism, which was necessary to allow the development of quantitative atomic models, has been accomplished only within the lifetime of some people now living.

What is the structure of individual atoms? Rutherford showed in the early 1900's that electrons moved in orbits about small dense atomic nuclei. Since then Bohr and others have shown us that we can usefully depict the electron as a smeared-out cloud of charge, and we think of the nucleus similarly except that it is smeared out in a cloud very small compared with that of the electron.

By the 1930's the nuclei themselves were found to be assemblages of protons and neutrons. A nuclear glue was needed to give the very strong forces between these protons and neutrons. So Yukawa predicted there were pi-mesons, and they were discovered in the 1940's. A proton attracts a neutron by emitting a pi-meson and becoming a neutron itself, sending the meson over to the neutron, which absorbs it and becomes a proton. Our present view is that *all* forces, including electromagnetic and gravitational forces, are exerted by just such an exchange of some sort or other—a rather diplomatic way of life in which attractions and repulsions are expressed by repeated exchanges.

At the same time that the nucleus was being studied, the structure of the electron was investigated, and it has been found to be as far as we know a truly elementary particle. However, even a "truly elementary" charged particle polarizes the vacuum around it, making electron-positron pairs—the positron is the anti-particle of the electron and must be created along with it when an electron is made out of nothing. The negative members of these pairs polarized out of the vacuum are pushed a long way away and the positive members of the pairs are attracted toward the center. Thus

*IT'S IMPOSSIBLE to visit Professor Frisch's lively laboratory without learning something or other about physics. This article is an abbreviation of his remarks, following those of Professor Shapley, last September 12 in the Kresge Auditorium Little Theater.*



**Which way are the balls going? . . . Is time reversible?**

an electron—a plain, ordinary garden variety electron such as hits the screen in a television tube—is clothed with charge polarized out of the vacuum around it, and has a much smaller value of charge than its bare charge would have.

By the 1950's a vast number of experiments had been done searching into the substructure of the electron and the nucleus, and everything which was found confirmed our view that all the fundamentals of behavior on the atomic and molecular levels are contained in the Bohr-Rutherford model.

It is, of course, very risky to make firm predictions, but there is every evidence that there are no further surprises on the atomic and molecular levels. Even such exciting new developments in physics as lasers and the behavior of magnetic fields in superconductors are remarkable discoveries or applications which lie completely within the conceptual framework already established.

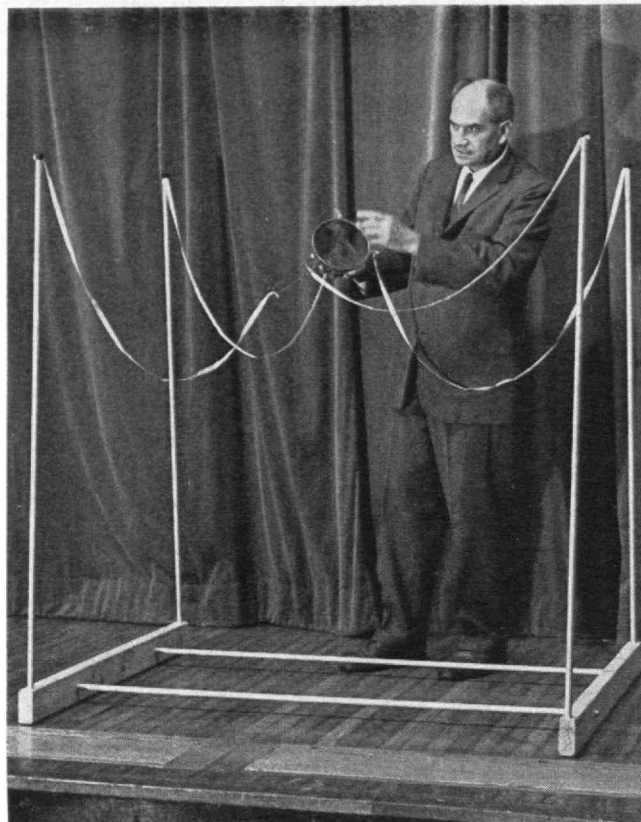
There is absolutely no evidence that the physicist can contribute anything more to the *elementary* physical basis of understanding any of the more complex physical or vital phenomena. To an elementary particle physicist, such different fields as fluid dynamics, solid state structure, and biology are all just complex applications of the superposition of the electric forces between electrons and nuclei, along with the laws of motion.

With respect to the substructure of the nuclei, things are more complicated. We still do not understand the forces between the protons and neutrons completely; indeed, we do not yet know whether for all circumstances we can usefully describe nuclei as made up simply of separate protons and neutrons. Nevertheless, except possibly in astrophysics, it is very likely that any new types of vibrations, oscillations, fissions, and fusions of nuclear matter that may be discovered can be described, at least approximately, in terms of present concepts.

So the question arises, are we now learning anything radically new in our continued probing of the infinitesimal? The answer is "yes, at an amazingly rapid rate." First, since 1950 we have discovered, by bombarding nuclei with higher and higher energy projectiles and looking at the pieces knocked out, that the pi-meson is not the only type of nuclear glue, but that instead there are many other mesons and many other heavy particles somewhat like protons and neutrons. Indeed, there is a whole zooful of strange particles we now call "elementary," despite the fact that many of them decay into each other in less than a billionth of a second.

There is now such a large and intricate collection of particles that it would be impossible to discuss them in a short time. Not so long ago, when the layman could try to keep up, The Boston *Globe* "Editorial Points" column, which has in it funny little squibs taking off the day's news, said when the anti-neutron was discovered, "We see that the atom now has more parts than Newton," referring not to the great man but to our neighboring suburb here outside Boston. An irate lady wrote in from Newton saying that it just wasn't so, and she listed first the electron, then the positron, the proton, the anti-proton, the neutron, the antineutron, the two mu-mesons, and three pi-mesons, all the particles known at the time. Then she listed Newton Center, Newtonville, Newton Corner, and so on, winding up with, "You see when we add them all up and compare them we still have Newton Upper Falls left over!" But those days are gone forever, and all one can say briefly is that the interrelation between these various particles are among the most interesting and intricate physical phenomena ever observed and codified.

What is particularly exciting is that in the course of putting the strange animals in this elementary particle zoo into some phylogenetic order, we have had to stretch our imaginations about our concepts of the physical world. Now there are the new concepts of "isotopic spin" and "hypercharge." In addition there may well be a substructure made up of particles having  $\frac{1}{3}$  the charge of the electron. (These charge  $\frac{1}{3}$  particles have



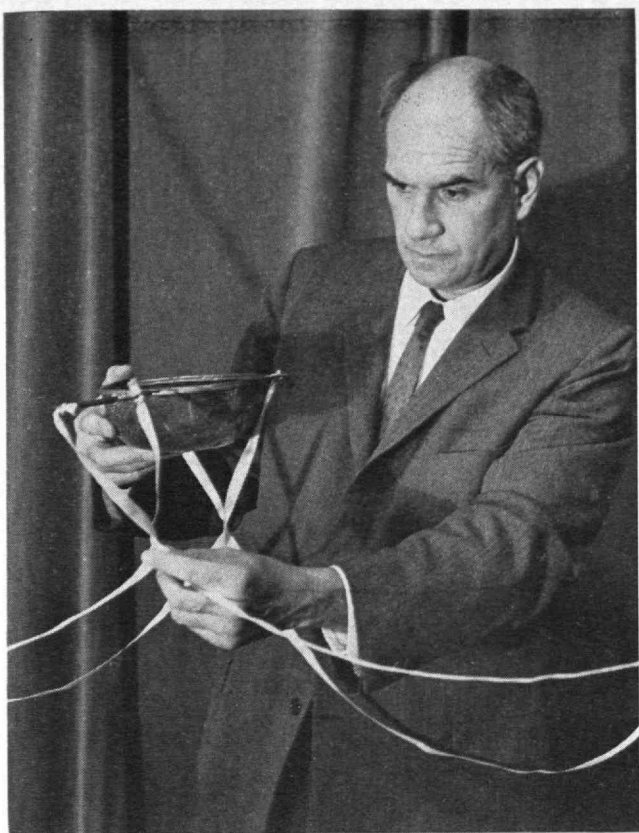
Professor Frisch shows that rotating a kitchen strainer . . .

been predicted and called "quarks" by Murray Gell-Mann, '51, thanks to whose either Yale or M.I.T. training they are named after a word in James Joyce's *Finnegans Wake*.)

I will try very impressionistically to illustrate by some large-scale examples how our view of ordinary space and time has been deepened by these studies.

First, there is a property of space discovered when quantum mechanics was developed: 720 degrees is really required for a full rotation in space instead of the familiar 360 degrees. On a large scale this effect is not observable—if it were, sculptors and architects would be having a grand time but engineers would go crazy—but it becomes a very important consideration when we investigate the infinitesimal. It can be suggested, in an indirect way, using large-scale objects.

Take any common object—I will use a cooking strainer both because it has many places to attach things and because it shows that any housewife can do elementary particle research if funds for her own proton synchrotron haven't come through yet—and tie it by various ribbons to a frame. The number of the ribbons and their locations make no difference. Now if I turn the strainer head over heels in any direction a full 360 degrees—not 180 degrees but a full 360 degrees—then it is snarled up in the ribbons, and unless I rotate it back again, I cannot disentangle it by trying to pass the slack in the ribbons around in various ways. If however I rotate it another 360 degrees in the same direction, making 720 degrees rotation in all, then by lifting the ribbons around it, it can be disentangled. The strainer has come back to its original orientation after



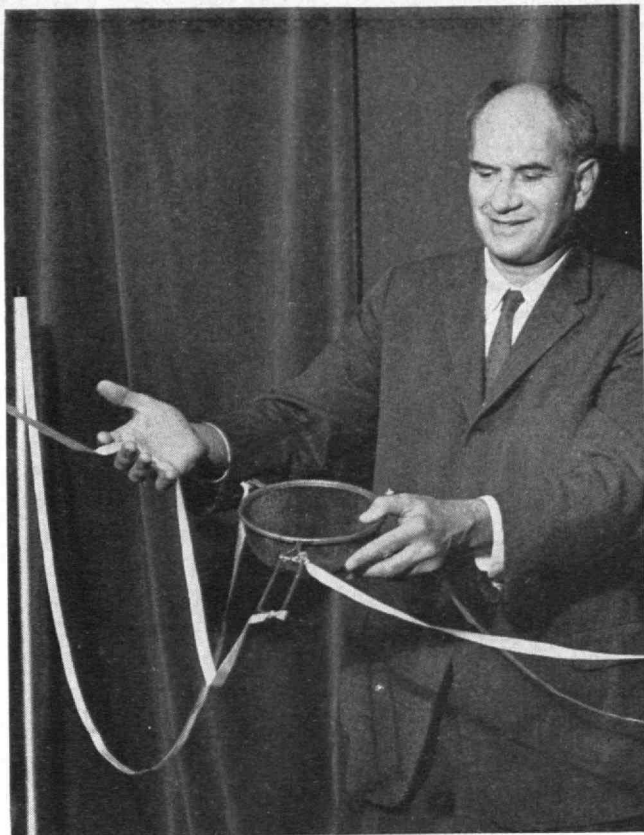
... only 360 degrees snarls the ribbons on it, but ...

720 degrees of rotation rather than after 360 degrees of rotation.

This is, of course, not a proof but just a parable, since a proton which has been rotated 720 degrees is absolutely indistinguishable from one which hasn't, but each of my ribbons has a twist in it, showing that the relation of the strainer to its surroundings is measurably different than before. On the other hand, some (but not all) of the elementary objects require 720 degrees of rotation rather than 360 degrees to be brought back to their original positions.

Having talked about space a little, let's go on to time. In the picture on page 19 from the PSSC High School Physics Text, we see the collision of two balls. This is a multi-flash photograph in which one ball is shown coming in from the top and the other from the bottom. They come together in successive pictures and then they come apart to the left and to the upper right, respectively. But, looking at this picture you can't tell whether it happened that way or in the opposite way, with the balls moving in the reverse direction. A movie of this collision could be run either way and make sense either way.

You may ask how is it possible then that we all have such a clear sense of the forward motion of time if the physical world is time-reversible. The answer is that our sense of time comes from our experiences that organization is hard to come by and disorganization is common. Again and again we see a more organized physical situation giving way to a less organized one, and we define the forward motion of time as following that sequence from more organized to less organized.



... he can turn it 720 degrees and disentangle them.

Nevertheless all the actual *elementary* interactions which make up the physical world, and hence the biological world, were believed until very recently to be reversible in time.

Just the last few months there has been found the first tentative evidence that there may be a favored direction in time on the elementary particle level. This time-irreversibility is an effect of only a few tenths of a per cent in those reactions in which it happens, and those reactions themselves are very rare, happening only one million millionth as often as the kinds of reactions which are time-reversible.

Since we always look everywhere for simplicity and symmetry, we are at first quite shocked at asymmetry in the time dimension. However, we survived a closely related shock not too long ago when a similar slight asymmetry was found in the space dimensions. This was the so-called "breakdown of parity"—a phrase which would sound particularly bad in a farm state in an election year, but which means that some elementary particles with a helical structure exist as left-handed but not as right-handed helices. However, their anti-particles are found to be right-handed. A universe created with equal numbers of particles and anti-particles would be quite symmetric as far as space-symmetry is concerned; we may just be in a part of the world where one of these two basic types of particle happens to be separated out because of a statistical fluctuation in the evolution of the universe.

To include symmetry in the time dimension we can similarly imagine a universe in which left-handed particles of the type which make reactions going forward



## Man's New Responsibilities

AS MAN masters more knowledge, can he master himself? This question underlay the whole M.I.T. Alumni Seminar last September 12 to 14, and James R. Killian, Jr., '26, raised it at the final session.

Professor Lincoln Bloomfield called a responsible attitude toward matters of public policy "a badge of culture," and Professor Max Millikan declared that the distinction between domestic and foreign policy has become obsolete.

"Man's most precious asset is his imagination," said Professor Harlow Shapley. But Vannevar Bush, '16, Honorary Chairman of the M.I.T. Corporation, warned against the tendency of some to carry scientific reasoning into areas where it does not apply, and Professor Huston C. Smith emphasized the need for "more clarity about what science really is."

The ultimate objective of social order, said Judge Charles E. Wyzanski of the U.S. District Court, is fulfillment of individual creative possibilities, and the great problem after the barriers of inequality are removed is not to insist on "too great a degree of conformity."



in elementary-particle time, and right-handed anti-particles of the type which make reactions going backward in elementary-particle time, were created in equal numbers. This suggests a modification of an old poem in which a lady bemoans her lost youth in the words "Backward, turn backward, O time in thy flight/Make me a girl again just for tonight." For elementary particles it should read "Backward, turn backward, O time in thy flight/Make me a left-handed boy again, just for yesterday."

Finally I would like to portray in homely terms a more subtle kind of symmetry in space and time, one that is completely unfamiliar in large-scale affairs. The

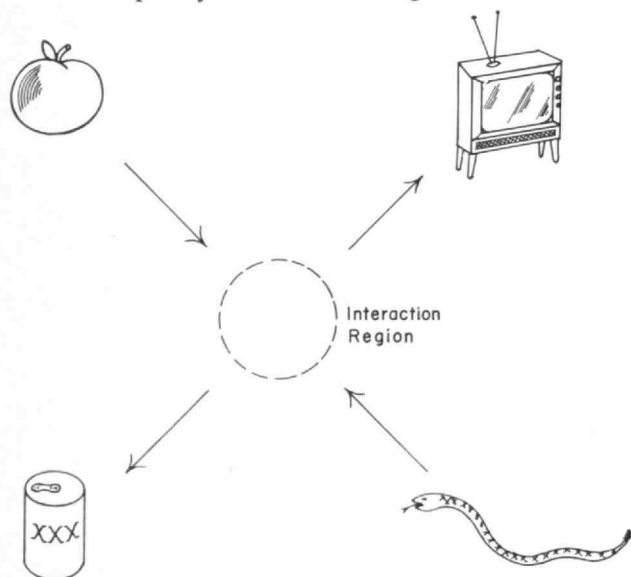


figure on this final page represents schematically the coming together of two objects and their going apart into two other objects, a so-called Feynman diagram named after a famous M.I.T. Alumnus. Because mass is just one form of energy, as Einstein pointed out, this serpent and this apple coming together may go out as a beer can and a TV set.

We have just said that if the reaction is of the predominant type in which time reversibility holds, the beer can and the TV set could go backwards in time and form the apple and the serpent, with the same probability as the original reaction had when it went forward in time. Now we ask an additional question: Provided we give the reactants the appropriate momenta, are the reactions also just as probable in which the serpent and the TV set form the serpent and beer can, or in which the serpent and the TV set form the apple and the beer can? If these crossed reactions are just as probable as the original reaction we say we have "crossing symmetry," and so far it seems to be true that we do have crossing symmetry in the common time-reversible elementary particle reactions. However, this is much harder to measure accurately than time reversal or space symmetry, and it may be that some day we will find a major violation of crossing symmetry in a reaction.

I must close with a final apology for the intrinsic difficulty of representing these infinitesimal situations by large-scale examples. I hope that these oversimplifications don't give a wrong impression of the style of the research—it really involves more complicated equipment than I've indicated, and it is very precise work.

# The Science of Culture

*Examining histories and behaviors of societies may shed new light on the differences in groups*

By SIDNEY W. MINTZ

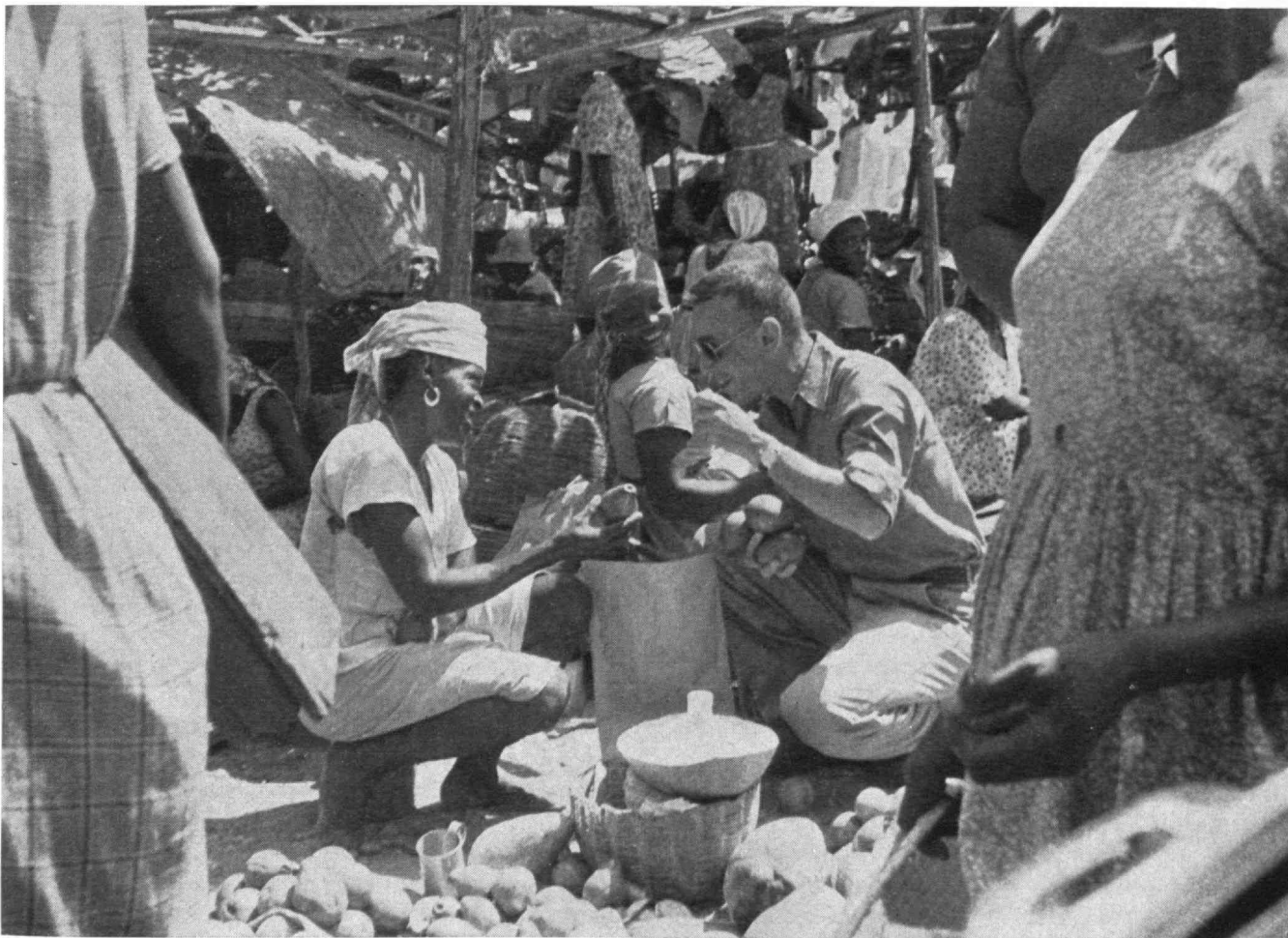
*Visiting Professor of Anthropology at M.I.T.*

**I**N THE wastes of northeastern Siberia, various groups of human beings practice a form of ceremonialism toward wild bears which has repeatedly attracted anthropological attention. These peoples both revere and attack the bear; they show it great formal respect, yet they kill it. The bear is addressed with a courteous kinship term—yet it is hunted and destroyed, and parts of it are ceremonially cooked and eaten. To outsiders, the treatment accorded the bear is bizarre, contradictory, and—to put it candidly—somewhat mad.

We can easily pluck out of the anthropological literature a thousand such illustrations of the naiveté, superstitiousness, and barbarity of the peoples of other societies. And when thoughtful observers suggest that the behavior of contemporary Americans might appear

equally strange, shocking, or contradictory, we may be willing to grant that we, too, fail to make much “sense” at times. But few of us are prepared to concede that our apparent irrationalities are really as irrational as those of other societies.

Behind our broadmindedness, we take secret comfort in our technical superiority, literacy, spirit of self-examination and reform, and humanitarian religious codes, even when we grant that not all of our overt behavior is entirely consistent. While we may do some strange things, we are sure we are *basically* rational, unlike those bizarre “others.” If nothing else can prove it, then our science, our rockets, our medicines, and our libraries must. Such a view, in effect, begs the question of what is essentially human in man, and weighs the apparent dif-



Professor Mintz is seen here in a Haitian market. He is the head of the Department of Anthropology at Yale University.

ferences more heavily than the apparent similarities.

The fact is, of course, that we cannot escape the evidence that all men are men, arisen from one great common trunk of life. The most foreign bear-worshiper, cannibal, or polygynist is closer to each one of us, biologically and mentally, whatever our society, than to any other kind of life. The lowliest of "the lowly savages" lives in an organized society with its own firm traditions, communicates in a richly symbolic language, strictly observes long-established sexual taboos, works in an economic system which satisfies group norms and human needs, bears and brings up children by carefully agreed-upon rules, and so on, and on.

The larger differences among groups of men rest neither in biology, nor in the tasks such groups must solve, since biological variation is far exceeded by basic likeness, and the tasks to be solved are essentially the same everywhere. The big differences among human groups rest instead on *culture*: the man-made part of human behavior, the socially learned responses of individuals to each other, to inner need, and to the outer environment. Though human behavior is clearly engrafted upon man's biological nature, it is not the same as that nature, nor is it an automatic or instinctive response to needs. Culture universally intervenes between basic human needs and their satisfaction, and provides invented, historically transmitted means; only under the most unusual circumstances may human needs be said to be satisfied without cultural mediation.

It is culture which has it that one society will ceremonialize its relationships with bears, revering them and killing them, while another ceremonializes its relationships with automobiles, revering them and being killed by them. Rationality, viewed abstractly, is relevant only insofar as the behavior of a people logically fulfills the underlying premises or values of the culture. No appeal to rationality can adequately explain why one set of values is followed, rather than another. One simple example from our own culture may help to make this clear.

Scientific agriculture capitalizes on the great productive potential inherent in the use of fertilizer, and the United States is a good case of a fertilizer-conscious country. Underdeveloped lands which fail to employ fertilizer are encouraged to change their agriculture accordingly, and any failures to do so are attributed to ignorance, so-called "blind custom," and irrationality. Yet the United States makes hardly any use of human fertilizer in its agriculture, and in fact engages a noticeable part of its productivity in disposing of human waste.

The reasons for this practice are not to be found primarily in considerations of public health or surplus productivity, though these are the "rational" explanations usually invoked. Rather, they rest firmly on the value system of this society, which maintains a culturally determined revulsion for human offal, and carefully instills this revulsion in its children, generation after generation. Even under circumstances of severe economic distress, it is unlikely that most Americans will be easily educated to employ human fertilizer. That several conversion plants are now operating in the United States

simply underlines the fact that values, not rationality, are at work, and persist in strength. Though there is lacking any religious ideology to support American views in this regard, it is not really very different from the Brahmin revulsion toward the eating of beef.

The example suggests that, regardless of the level of "rationality" which typifies the practices of one society as compared to another, the basic values of the culture, including such matters as taste, aesthetics, and belief, are usually taken for granted unquestioningly. Only in this way is it possible to maintain the view that one society is rational, another irrational, in practice.

One's cultural values are acquired throughout growth, but particularly in the years of childhood. For the most part, they are not assimilated explicitly, but as part of the learning of everyday acts. No wise mother undertakes to discuss the comparative efficiency of forks and chopsticks while training her child to eat—in fact, lengthy relativistic discussions of cross-cultural values might prove very disturbing to the child, unless he had already assimilated successfully the behavioral norms required to continue functioning as he grows into his own society.

Inevitably, one's culture comes to be regarded as "the right way to live," even if no stress is put on its superiority to other cultures. It is remarkable to note the extent to which the learning child takes on the characteristics of his culture—the grammar of its language, the etiquette of its table, its food preferences and taboos, its rules of social behavior—without violent dissent. Such acceptingness is the price of growing up, of becoming more human, whatever the particular culture may be.

Cultures, of course, do not have lives of their own, and there is a real danger in reifying them. A culture is carried by the members of a society, and if a society dies, its culture—except for those parts which may have diffused to other peoples—dies with it. But no individual can contribute more than a minuscule amount to the culture he learns and carries. He gets his language, his style of dress, his cuisine, his basic values ready-made; and by learning the minimum necessary to function, and perhaps to work for change, he becomes—much more than he can ever tell—a product of the culture itself.

Thus, it is easy to see that a culture is an historically transmitted and perpetuated system, maintained in each case by hundreds, thousands, or millions of individuals. Only by becoming aware of the enormous extent to which we are the unthinking products of our own culture are we able to begin to assess and to question its values, and their fit with the behavior which accompanies them.

It is in the history of societies, and in non-valuative comparisons of their behaviors, that one finds the beginnings of explanation for group differences. Such differences are not related to human biology, nor are they to be explained in terms of individual behavior. They are extra-organic, and super-individual. Their full documentation is anthropology's task. Through this documentation, we take our first steps toward scientific comparisons of societies, and toward the planning of change consistent with social needs.



# The Individual in Society

BY RICHARD M. DOUGLAS

WE SEEM no closer to having an explanation of differences between individuals in the Twentieth Century than Galen of Pergamon was in the Second, and indeed our own language of differential psychology has come down into modern usage, almost unmolested, from antiquity. We still talk, as Hippocrates and Galen did, about "aptitude," "innate ability," "character," "disposition," and "temperament." And George Sarton suggests that no other doctrine of ancient science has survived so long with so few changes as the differential psychology of Greek medical theory and Hellenistic thought.

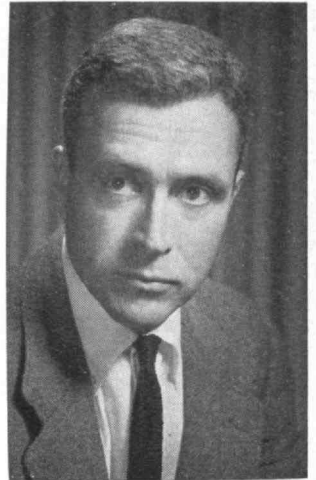
In his comments on "keeping your character" Epictetus assumes that "everyone is born for something different," and proceeds to ask, "How therefore shall we discover, each of us, what suits his character?" The question can be found, in a strikingly similar version, in Erik H. Erikson's *Childhood and Society* (1950) and *Young Man Luther* (1958 and 1962). In arguing that "everyone . . . holds fast to his own particular gifts," deliberately choosing the *genus vitae* which expresses them or conforms to his "peculiar nature" most consistently, Cicero uses language close to Erikson's when Erikson describes the effort of the adolescent to seize his own "style of integrity." And Erikson uses an idiom familiar to Petrarch, Boccaccio, Vergerio, Erasmus, Ronsard, and Montaigne when he writes about "the acceptance of one and only life cycle as something that had to be."

For Petrarch it is man's fate to accept the condition and burden of his own nature (*ingenii . . . sortem*), measuring personal style to his aptitudes just as he cuts his clothes to fit his body. And Montaigne observed in the *Essais* that "there is not a man, if he listens to himself, who will not discover within himself a form altogether his own, a master form which resists both education and harmful passions."

The appeal of Erikson's *Young Man Luther* to college students today may well disclose a shock of recognition—in a brilliant success of restatement—about something we already knew. The "identity crisis" offers, with dramatic brevity, a short phrase for values and language (as well as psychiatric episodes) which have been familiar in our history for 600 years. These values and episodes, like our language about individual aptitude and temperament, are also remarkably West-

*That every child sets forth to his own mystery is an idea that has a long and intriguing history*

AT M.I.T. students now may take a "double-major" program in humanities and science or engineering. As Head of the Department of Humanities, Professor Douglas has responsibility for this program. He formerly taught at Amherst. His scholarly interests are in European history, the Renaissance, and the Reformation—as this excerpt from his Alumni Seminar remarks suggests.



ern, and singularly affiliated with our cultural tradition. When Erikson describes early adulthood as a "period in the life cycle when each must forge for himself some central perspective and direction," the "must" is a rule of culture, as the anthropologist would say it; but it is also a permission which had to be invented in the history of our own tradition.

In Renaissance letters, private documents, formal treatises, and dialogues the argument was very much the same. Men like Petrarch and Erasmus insisted that the young must be *free* to shape life according to their aptitudes, so that each may follow his own nature, "to cultivate what is proper to himself," and to decide "who and what manner of men we wish to be." A massive literature in defense of such "liberty of decision," as one humanist put it, was written during the Renaissance by poets and scholars seeking to win acceptance for their own choices and for the freedom of such choice in principle. In defending the right of the young to act on the discovery of their own inherent aptitudes, these humanists evidently succeeded so well that the identity crisis became a clinical fact. But what is now both a clinical fact and a conversational cliché must be recognized for its uniquely Western quality, just as it should be historically regarded as an audacity of Renaissance thought built out of Greek psychology and Roman ethics, and in opposition to a whole corpus of contrary opinions in medieval theory, custom, and law.

Although it seems reasonable to accept Jakob Burckhardt's claim that the humanists achieved the discovery

of the individual, it is important to add that they made far more out of the individual as the vehicle of a single "aptitude," "inclination," "disposition," or "temperament," than they did out of the versatile man of many talents. In fact it seems far more accurate to see the archetype of "Renaissance man" as a man driven by a single passion than as a *uomo universale*, or a Nietzschean Superman. The ideal instead was Boccaccio, "born for poetry" and a self-confessed failure at law and trade; Michelangelo, impelled by frenzied, lonely "genius"; Luther, willing to stand alone; Machiavelli, with his obsession with politics; or John Donne, captive to his melancholic humors. The idealization of the individual was the praise not only of singularity but of the man who finds his master talent and yields to his own uniqueness—to what Montaigne called his *forme maîtresse*. In Renaissance theory, as in Erikson's, identity is not many qualities but a single, brave definition; not wide versatility, but a steady consistency, a "constancy" (Cicero and Petrarch) of the self.

Another significant point of contact between Renaissance doctrines of individuality and Erikson's concept of identity is the attention in each case to childhood and adolescence. In medieval literature the child was scarcely noticed, possibly because the child's future was expected to repeat the father's past. But in the new doctrines of Renaissance pedagogy the child—if educated—was expected to go where his talent took him, into a future of his own making. The personal future was to be a new artifact, fashioned from a discovered identity, and not the repetition of the father's life (as is the case still in traditional societies). Young life is therefore a process, a becoming, in which parents and teachers help to "set forth" children as an Elizabethan teacher put it, "each to his own mystery." Significantly

too the humanists invariably describe the achievement of one's "style of life" and vocation with metaphors of motion, such as "path" or "road," rather than in static figures of medieval legal theory, such as "status," "order," "rank," or "estate." One moves into or discovers his *genus vitae*; it is not assigned to him by inheritance or birth. He does so, moreover, not necessarily through vertical mobility (a later idea or ideal) but in lateral movement to something invariably unlike his father's craft or profession. And although the Chinese Mandarins' "ladder to the clouds" led the successful scholar to the imperial court, the court was precisely the place the majority of humanists were determined to avoid or escape, seeking instead their privacy and their "sacred silences."

It is significant that the idea of individual uniqueness and individual aptitude originated in the city-state culture of ancient Greece and was elaborated in the city-state society of Renaissance Italy—in small-scale communities. To maintain a modern industrial society, and to profit from the advantages of releasing new energy into our kind of world, may be far more difficult—and far more urgent—than in the time of its origins.

Today, of course, the defense of individuality is no longer just the angered petition of artists and writers seeking their own dignity. Yet it would be hard to imagine the achievement either of Western science or of Western literature without the steady appearance of what the humanists called "new man," from obscure origins, free to find, and encouraged to find, their own power. The urban society, with mobility both lateral and vertical, is as much an invention of the West as the value the West has come to place on the diversity of individual aptitudes and talents. In fact, the two conditions—the two ideals—would seem to go together.



ALUMNI and their wives discussed "The Nature of Man" at breakfast, lunch, and dinner during the semi-

nar. Dean Emeritus Harrison (at speaker's stand) was chairman of the committee that drew up the program.

# Computers and Study of the Brain

*As new tools of science, machines evoke some new concepts of how the mind of a man works*

BY WALTER A. ROSENBLITH

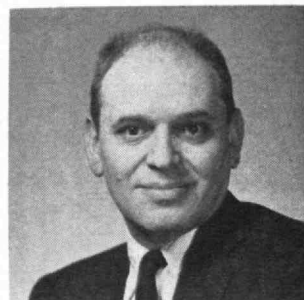
IN ALL CIVILIZATIONS man's brain, evolution's intricate and little understood achievement, has been an object of wonder and curiosity. Since the first industrial revolution man's life has been shaped ever more by those products of his brain that we call science and technology. But all too slowly has mankind developed tools capable of exploring the brain.

In the Western world this lack of direct knowledge about the workings of the brain has led to frequent comparisons with the most complex engineering achievements of a given era. Along this historical path, men have used clockworks, telephone exchanges, and recently electronic brains (i.e., computers) to conjure up images of what brains might be like.

The history of technology is rich in devices that have served to multiply, extend, and refine man's muscles and senses. Computer technology enabled us to do something qualitatively different, namely to extend, refine and, above all, speed up certain logical operations that were traditionally the province of man's central nervous system. The impressive logical capabilities inherent in computers led to a great deal of enthusiastic, but often loose, metaphor-making about how the brain works. Once the newness of these analogies wore off, workers from the disciplines traditionally engaged in brain research found most of them quite trivial. A running debate arose then between those intent upon modeling or simulating cognitive behavior and those content to carry on brain research in the broad empirical tradition of the biological and medical sciences.

In this debate the performance and structure of computers and brains were compared and contrasted from a variety of viewpoints. Some emphasized analogies in regard to symbol manipulation (theorem proving or chess-playing) while others focused upon the all-or-none characteristics of the neural componentry. The fact that the human brain is the product of a long evolutionary process in which the massive handling of abstract symbols is only a relatively recently acquired skill was often overlooked. Computers, on the other hand, need not be designed to manipulate the world in relation to basic biological necessities. Thus whenever computers and human, body-bound, brains combine in the solution of a task, our aim should be to have them supplement each other co-operatively rather than to act as pale and mismatched competitors for each other's roles.

PROFESSOR ROSENBLITH has used computers to explore the brains of cats and men, among other animals, and he made his listeners at the M.I.T. Alumni Seminar think about problems involved in finding out just how they think.



Given our present rather incomplete understanding of all complexly organized, multi-component, multi-purpose systems, it is scarcely surprising that there is confusion regarding how computers and brains relate to each other. There is a lack of clarity about the sense in which computers are equivalent to—or behave analogously to—brains. Can we be satisfied with over-all agreement in terms of input-output relations? Or must the computer's circuitry also reflect the currently known anatomy of the nervous system, and must individual components go so far as to exhibit the various physico-chemical events known to occur in the brain?

How satisfactory analogies prove to be depends, of course, upon what it is that one hopes to understand with their aid. If the model-maker's primary concern is with man as a symbolic animal, the neuro-sciences have as yet little to contribute to the improvement of the symbol manipulating habits of computers. If our aim is rather a comprehensive theory of brain function, we must be willing to incorporate into it experimental findings that range from the macromolecules of heredity to the ways in which child-rearing practices influence the perceptual, emotional, and social development of personality.

Space is lacking to compare here in meaningful detail the behavior of relays and neurons, or to survey even briefly the organization of brains at various stages of evolution. Were we to go through these exercises, however, we would find that the capacity of a brain to manifest what we call intelligent behavior is not a simple function of the brain's size, weight, volume, or even its number of neurons. More subtle measures of organized complexity are required, and it is precisely in the search for such measures and concepts that com-



puters have been exceptionally useful. Computer techniques have added much power to a variety of existing experimental approaches, they have allowed us to carry out previously unimaginable types of analysis, and in addition they have spawned entirely novel ways of thinking about brain performance.

### Current Strategy

However, up to the present, no single model or approach promises to yield, within the foreseeable future, the understanding we are seeking. Hence a pluralistic strategy remains indicated:

► Computers are being used increasingly in the processing and in the analysis of neuroelectric data. Computers have made possible extensive statistical treatments of electrophysiological data and have enhanced our ability to detect spatiotemporal patterns in these data. In this type of analysis the emphasis is not so much upon either a detailed description of the neural generators or upon the characteristics of the brain as a medium, but rather upon the ways in which sensory stimuli are coded and upon the ways in which complicated or executed behaviors reflect themselves in these electric events.

As computers become more powerful and more compatible with brain research, it will be possible to carry out many of these computations "on-line." Coupling the computer effectively to both experiment and experimenter offers potentially great advantages. "On-line" operations provide for effective monitoring and control of the "state" of a behaving organism, for immediate answers to an experimenter's questions and ultimately for a "closed-loop" type of experimentation.

► Another approach makes use of computers in various "mathematical experiments." Inspired by the early papers of Pitts and McCulloch, many models for networks of "neuroids" (or formal neurons) have been formulated. These neuroids are endowed with a limited set of properties, and networks having different geometries are built out of such neuroids. The derivation of theorems for such networks soon proved too difficult for the available analytical techniques. At that stage some workers had recourse to computers (preferably with large capacities), while others translated a limited set of neuroidal properties into hardware neurons (also called "neuromimes"). The latter can be assembled into flexibly organized nets, and then lend themselves to a variety of experimental purposes.

These efforts have started already to yield a catalog of possible behaviors of complexly organized structures. This catalog is bound to enhance our intuition regarding the social psychology of groups of neurons.

► A third class of approaches has emerged for which the heading "Cognitive Science and Technology" is perhaps most appropriate. Those who prefer to refer to their work as "simulation of human problem solving" reason somewhat as follows: Computers are quite general symbol manipulating devices that can perform nonnumerical symbol manipulation, as well as numer-

ical ones. Computer programs can be written that make use of nonnumerical symbol manipulation to perform tasks that, when performed by men, are said to involve *learning* and *thinking*. Thus these computer programs can be regarded as models for the corresponding human process and human and machine performance can be compared.

Those who prefer that their approach be known under the label of "artificial intelligence" emphasize that while engineers do their share of studying nature, they rarely choose to imitate nature slavishly in the solution of a particular problem. By concentrating upon a limited set of objectives, cognitive technologists may discover novel, short-cut solutions to problems that now seem forbidding and in the process may help us view human cognitive behavior in novel ways.

Some scientists and engineers are particularly concerned with man-machine interactions. Their substantive problems range from command and control to the programming of teaching machines. Their proximity to, or symbiotic relationship with, computers enables them to distill a certain wisdom regarding the ways in which computers and brains differ or can be made to match.

### A New Style of Research

This partial list of the ways in which computers may be used to study the brain illustrates how we have moved, in less than two decades, from gross and overall comparisons between computers and brains to a situation in which computers have become recognized as indispensable instruments in the study of the human brain that designed them. A new style of brain research has emerged as a consequence of this recognition. If we ask ourselves what makes computers so indispensable in this quest, we find it hard to give a concise answer; this difficulty stems in part from our lack of a rigorous philosophical conceptualization of the measurement problems that are involved. Those who have come to depend upon computers in their research have become convinced, however, that properties of the two complex systems—the one under study and the one that is serving as an instrument—exhibit more than casual similarities.

Our rapidly changing technological environment continually puts greater emphasis upon communication and control (*tout comprendre c'est tout contrôler?*) without leaving enough time for normally adaptive evolutionary changes to occur. To operate institutions that depend upon enormous amounts of accumulated—and not always integrated—bits of information, a new division of labor needs to be worked out between men and machines. Let man leave giant bookkeeping routines, carried out at megabits per microsecond, to computers. Let him concentrate instead on tasks that he cannot afford to delegate to machines because he is unable to formulate them for automatic processing. And let, above all, man intensify his quest to understand the workings of his brain. For without such understanding he may be unable to make intelligent use of presumably intelligent machines.

# Science and the Human Spirit

*Its view discloses only a fraction of reality, a philosopher reminds an Institute alumni class*

BY HUSTON SMITH

TO MAN'S material life, and his intellectual bite, science has brought clear gain. Its repercussions on the human spirit have been, thus far, more ambiguous. One senses in men like Buckminster Fuller an *élan* which continues the Enlightenment's conviction that science is an escalator destined almost inevitably to carry man to celestial heights. But there are concurrent signs that man's psychic center has been thrown off-balance and is wobbling.

If it is, it's no wonder. For the human spirit to have held completely steady under the blows of the last 400 years, it would have had to have been not human but superhuman or inhuman. For step by step science has undermined a host of important convictions by which man had lived since time immemorial. Copernicus undermined man's belief that he stood at the center of the universe, Darwin that he was specially created. As the scientific world gained in clarity and came to command increasing conviction, man's soul, an afterlife, God, and human freedom were called into question, for none of these turned up on the photographic plates. The world which hitherto had seemed like a fertile womb, mothering and sustaining the values by which man lived and which gave meaning to his life, suddenly began to take on the appearance of a womb impregnated by a plastic coil contraceptive which rejects its children (ova) and permits nothing to cling to its lining.

Meanwhile, while sketching a new *world view* with its right hand, science was building (through its protégé technology) a new *world* with its left. The soil of this new world seemed no richer for the nurture of human values than was the atmosphere of the scientific world view. Technology (1) increases the contact among the peoples of the world, (2) accelerates the tempo of social change, and (3) furthers role diffusion: by increasing enormously the number of people an individual comes into contact with, it increases the occasions on which he is met only in terms of one of his roles—as bus driver, voter, potential customer, or whatever—not as the total person. Each of these aspects of technological society disturbs human values.

Science had already shown that values weren't ingrained in the universe. Now (1) cultural relativism (brought to light by increased contact among peoples) showed that they weren't even grounded in *man*, for different cultures have different values. If, accommodat-



THE AUTHOR (*in center*) was the final lecturer at the M.I.T. Alumni Seminar. He has been professor of philosophy at the Institute since 1957. At left is Professor Isadore Amdur, chairman of the session on "Man and Society," and at right is U.S. District Judge Charles E. Wyzanski, who participated in the discussion of "Man's New Responsibilities."

ing himself to the discovery that his values run no deeper than his own society, modern man resolves to live by *these*, he finds that (2) social change has become so rapid that it prevents his society's values from remaining stable. In desperation he concludes that his values must be anchored in *himself*, only to find (3) that his life has become so splintered into roles as to leave little core of selfhood to found his values on.

These are some reasons for supposing man's spirit *may* have been disturbed by science and its outworkings. But *has it* been disturbed? Is it disturbed today?

I think it is. I shall not appeal to your own intuitions by asking if you personally experience more winter in your souls than seems seasonable in this summer of our technological achievement. I shall forgo such intuitional evidence in favor of some that is a bit more objective. There are no completely objective readings of the human soul, but philosophy, theology, and the arts provide the most reliable indices we have. They are the most sensitive barometers of man's spiritual climate available, and today they all read "storm."

Art's rendering of man's current condition has been nicely summarized in the January, 1964, issue of the

*Journal of Social Issues* (guest edited by Professor Warren Bennis, '55, of M.I.T.). It is typified by the appearance of a new artistic phenomenon, "the theater of the absurd." Perhaps the first thing that strikes us about such plays as Beckett's *Waiting for Godot* or *Endgame* is their stark, barren stage. Stripped of all that is familiar and comforting, they are like the gaunt plains of the moon. An alien atmosphere for alienated men. The characters in these plays live in a subsistence economy of the psyche. They are barely alive. Something terrible has happened to their world; it has become inhuman while carrying memory-traces of a more normal realm. Life in such a world has lost its meaning.

What artists depict thus graphically, philosophers register abstractly. Camus' verdict on life was that it is "absurd," Heidegger's that it is "dread-ful," Sartre's that it is "nauseating . . . a futile passion."

Some will want to challenge the artist-philosophers' assessment of the mood of our times. Others will accuse those who feel dispirited of moral flabbiness and failure of nerve. But these moves are not very constructive, for both point toward complacency. Push them far enough and the conclusion is that no spiritual problem exists, or at least none that positive thinking can't take care of. The important question is not whether man's spirit is worse off than it was, but rather: Is it as healthy as it could be? And what concerns us here is: Can it be related to science more constructively than it now is?

Man's spirit is rooted in both society and the cosmos. Both rootages have been disturbed; man's social roots by technology, his cosmic roots by science. An example of social disturbance is that occasioned by industrial society's high mobility. The typical American now moves on an average of once every five years and will change jobs three times. Lives shuffled this often find it difficult to develop the sense of community they need.

It is the responsibility of the social sciences to keep an eye on the social roots of the human spirit and try to see that the soil that surrounds them is as nourishing as possible. (Professor Douglas McGregor's *The Human Side of Enterprise* is a nice instance of an attempt to spot

some dehumanizing features of current industry and suggest how they might be mitigated.) Meanwhile religion's task, and that of branches of poetry and philosophy, is to look to man's cosmic roots. Unlike society, the cosmos can't be managed, but to some extent man's understanding of it can be. The task of religion and the philosophy of religion is to see that the roots of the spirit that extend into the cosmos are nourished by the best possible comprehension of man's place in the scheme of things entire.

In an age of science the most important job for the philosophy of religion is to save men from the mistake of supposing that the only cosmic soil their spirits can root in is that indicated by the scientific world view. To prevent such misunderstanding is no easy job, for the achievements of science are so impressive that they reflect back on its world view to give it greater standing and finality than it deserves. But if we let our minds be guided by logical rather than psychological considerations, we can see that the scientific view of things is so incomplete that to live in it would be like living in a house's scaffolding, and to love it like loving one's wife's skeleton.

It is impossible to prove this last assertion, but there are reasons for thinking it is true. They come from what we know about the scientific method, human perception, and evolution.

► As our understanding of the scientific method improves we see ever more clearly the extent to which the answers science comes up with are *answers to the questions it asks*. As Norbert Wiener used to say, messages from the universe come addressed no more specifically than "to whom they may concern." Scientists open messages that concern them. No mosaic constructed from messages thus highly selected can show more than reality's skeleton. Since scientists *as scientists* don't ask if life has meaning or whether values are grounded in the universe, it is not surprising that values and life-meanings don't show up in the answer book the world returns to them.

► At a deeper level, we understand now how selective are our sense organs themselves. If we had x-ray eyes, if smell were our dominant sense instead of sight, if we could feel magnetic fields or had distinct extrasensory powers, how different our world would be! Evidence again that the scientific view of things, extrapolated solely from the kinds of stimuli our senses happen to register, discloses only a fraction of what is real.

► At every stage evolution has brought to view a world which not only quantitatively but qualitatively would have been completely inconceivable from the vantage point of the preceding rung on the evolutionary ladder. What reason is there for supposing that our present scientific outlook provides the apex view, either quantitatively or qualitatively?

There is an old rabbinic saying to the effect that if you can't believe in God then the next best thing is at least not to believe in idols. Science cannot make us believe in God, but an understanding of science can keep us from absolutizing its outlook and thereby making an idol of it.

### If You'd Like to Know More . . .

BOOKS by M.I.T. Alumni Seminar teachers represented in this issue of *The Review* include:

*Of Stars and Men*, by Harlow Shapley (Washington Square Press, 50 cents), which discusses such questions as: Is there life in other worlds? Will earth remain habitable? Is the human brain really superior?

*Elementary Particles*, by David H. Frisch, '47, and Alan M. Thorndike (Van Nostrand Momentum Book, \$1.75), which covers methods and ideas in terms clear to anyone familiar with general physics.

*The Religions of Man*, by Huston Smith (New American Library, Mentor paperback, 75 cents), which gives an account of the origins, tenets, and modern values of the world's great religions.



# A 'Haystack' Is Dedicated to Extend Man's Capability

**HUMAN AWARENESS**—the goal of much of the work reviewed on the preceding pages this month—will be further extended by the new Haystack microwave research facility that was dedicated on October 8. It is the newest and largest of the M.I.T. Lincoln Laboratory experimental facilities 30 miles northwest of Boston.

► As a communication instrument, Haystack is expected to show how the rate of data flow between distant points on earth can be increased, and make communication possible between men on earth and space vehicles 100 million miles away (400 times the distance to the moon).

► As a radar, it should be capable of tracking a target the size of a .22 caliber bullet at a distance of 1,000 miles, a moderate-sized space vehicle in a synchronous orbit 20,000 miles high, or several of earth's planetary neighbors.

► As a radio telescope, it will substantially increase the precision with which astronomers can map radio sources in the sky and probe surfaces and atmospheres of planets hitherto beyond man's reach.

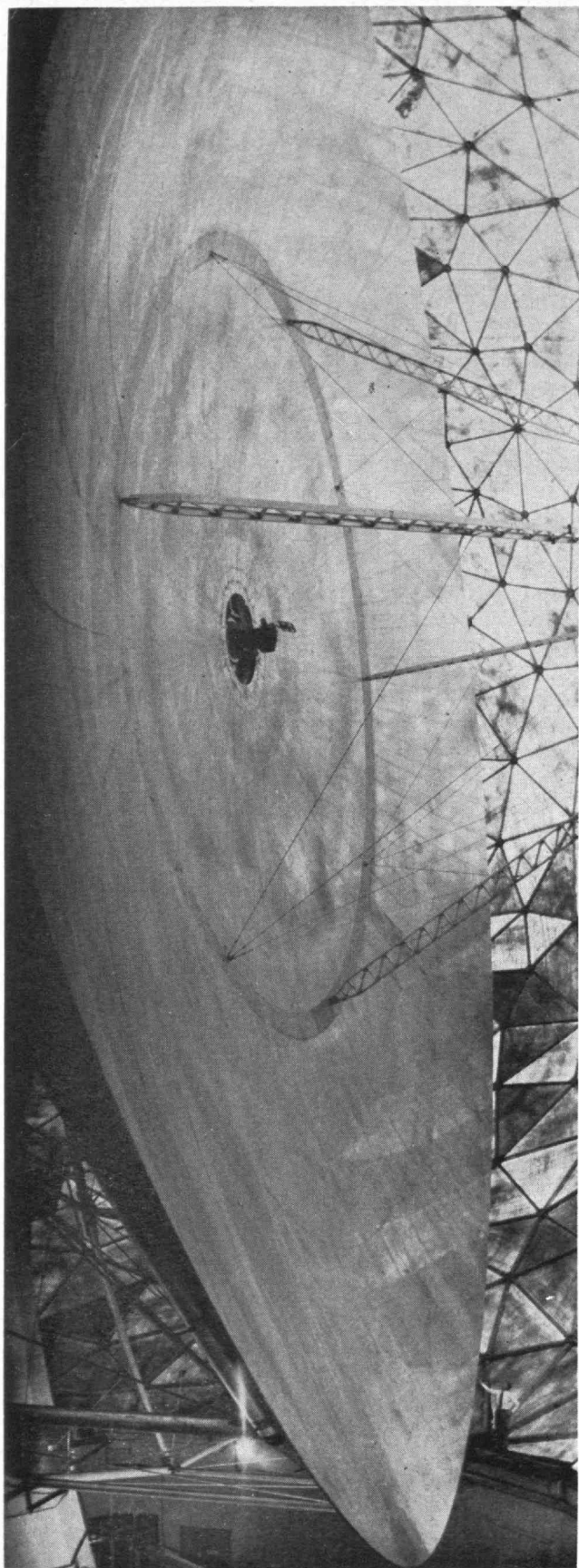
The Haystack system is built around one of the most sensitive microwave antennas ever constructed, a dish 120 feet in diameter with a surface accuracy of better than .075 inch. (*It is pictured at the left.*) This antenna is the most precise moving structure of its size ever built, and is protected from high winds by the largest rigid radome in the world, a beautiful globe 150 feet in diameter.

New techniques for computer analysis of complex mechanical structures were developed to build this antenna. So, too, was a large and novel hydrostatic bearing that is expected to be virtually immune to wear.

The antenna reflector geometry is Cassegrainian, and interchangeable equipment rooms that can be plugged in behind the big dish will facilitate its use at different frequencies for various purposes. Advantage has been taken of recent advances in low-noise maser and high-power transmitter technology to increase the system's sensitivity, and a digital computer is so integrated into the system that an operator has control of the huge antenna literally at his fingertips.

Haystack was established with support from the U.S. Air Force. It was conceived and will be operated by Lincoln Laboratory. General Bernard A. Shriever, Commander of the Air Force Systems Command, was the principal speaker at its dedication, and two of the men responsible for its completion, Lt. John Shock, the Air Force Project Officer, and Herbert G. Weiss, '40, received awards for their contributions.

Mr. Weiss has been a leader in microwave development ever since he interrupted his graduate study at M.I.T. to join the World War II Radiation Laboratory. He has had a hand in the development of many important military radar systems, both large and small, and his vision, dedication, and leadership are credited by his colleagues with contributing largely to the successful completion of the Haystack facility.



## Snail Creeping Power

A PUERTO RICAN SNAIL weighing 1.2 grams and standing 1.88 centimeters tall has a maximum power of just  $.40 \times 10^{-6}$  horsepower. To achieve a total output of one horsepower would require the combined efforts of 25 million snails.

Who cares? Five ergs of work isn't much. But it could matter to an estimated 100 million people afflicted with a debilitating disease called schistosomiasis. Most of them live in tropical countries with large irrigation and drainage systems, where the snails multiply if the canals are not kept clean of silt and vegetation. Those snails can harbor a worm called *Schistoma mansoni* whose larvae invade the human bloodstream and eventually cause serious damage to the liver. In Egypt about 90 per cent of the population suffers from schistosomiasis contracted from the almost stagnant canals of the vast Nile irrigation system.

But snails do not live in streams that have even a relatively low velocity of about 1.3 miles an hour, simply because they can not keep a foothold. And therein lies the question of snailpower. Studies in the M.I.T. Hydrodynamics Laboratory, reported recently in *Science*, have set forth basic information about dislodging snails in flowing water—and indicate that proper engineering of new canals could control snail populations.

Because the velocity of a stream is not the same everywhere along its bottom, William R. Jobin, '59, and Professor Arthur T. Ippen first measured the drag forces on dry snail shells. They then determined the staying power of live snails by training the animals to pull light loads. A number of the Puerto Rican snails, which are the intermediate hosts for schistosomiasis in the Western Hemisphere, were rigged in small harnesses and placed on platforms of various materials in an aquarium that was "the arena for snail taming."

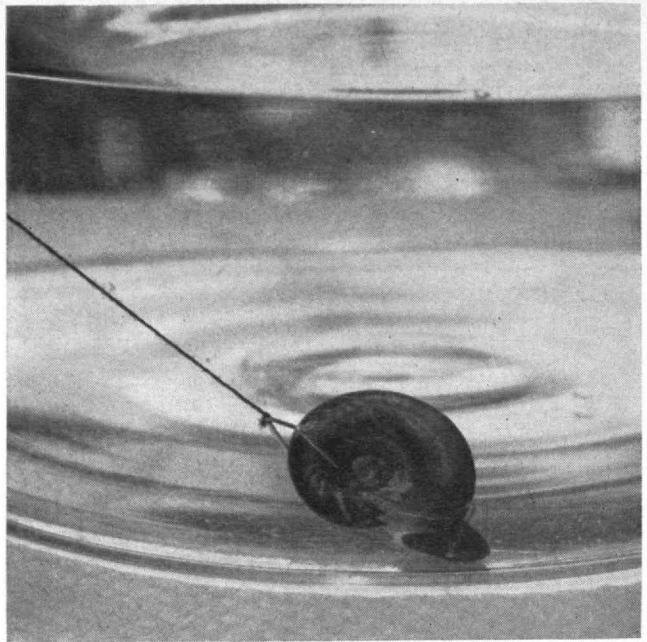
The experimenters attached a length of nylon thread to each snail harness, passing it over a pulley outside the tank, and then applied increasing loads in increments of 100 milligrams. The snails first moved "rapidly" against the load, but came to a halt under a burden of 800 milligrams and lost their hold when 100 more were applied. Larger snails appeared weaker, "perhaps due to aging."

Tests in flowing water showed that the true "dislodging velocity" of 65 centimeters per second was lower than that calculated from the pulling contest because of "the reaction of the animal to the dynamic character of drag."

Mr. Jobin reported this in his master's thesis in civil engineering. He has since worked for the World Health Organization on the extent of schistosomiasis in the sugar plantations of Southern Rhodesia, and has gone to Puerto Rico for the U.S. Public Health Service to study chemical controls of snails. He is now at the Harvard School of Public Health.

## In Ellen H. Richards' Memory

THE Eastern Massachusetts Home Economics Association has provided a \$500 Loan Fund at M.I.T. for women students interested in chemistry as related to food processing and technology. It bears the name of Ellen H. Richards, '73, the first woman graduate of the Institute and a founder of the science of home economics.



*A snail in harness may look ridiculous but also may contribute to efforts to prolong life in tropical lands.*

## Dr. Stratton Is Honored

PRESIDENT Julius A. Stratton, '23, visited M.I.T. Alumni in South America this fall during a 10-day trip to Colombia and Venezuela. His journey, he says, impressed him with the international dimension of M.I.T.'s educational mission. "One of the greatest contributions that the Institute makes is the continued fostering of better international relations through the activities of loyal Alumni in other nations."

Two years ago the M.I.T. Club of Colombia formed a Translation Committee to prepare a Spanish edition of the high school textbook produced by the Physical Science Study Committee at M.I.T. The translation has been completed and the club has promoted the book with the Colombian government and aided in its distribution to schools. During his visit, President Stratton received a copy of the textbook autographed on the flyleaf by members of the club, many of whom are active in national affairs.

In Bogotá, the Cruz de Boyacá with the grade of Commander was conferred on Dr. Stratton at a dinner in his honor given by the M.I.T. Club, of which Rodrigo Uribe, '41, is president. The Order of Boyacá is the highest citation given by the Republic of Colombia and derives from the victory of Boyacá in the 1819 war of liberation led by Simon Bolivar. Virgilio Barco-Vargas, '43, Colombian Minister of Agriculture, presented the award on behalf of President Guillermo Leon Valencia of Colombia.

In a letter to President Valencia later, Dr. Stratton commented that the award was "symbolic of the warm ties between your country and mine and in particular of the part that M.I.T. has played in the education of a number of outstanding Colombians."

As a trustee of the Ford Foundation, President Stratton also conferred in Bogotá with officials of the Universidad Nacional and the Universidad de los Andes. In the city of Medellín he met with representatives of government and of the Universidad de Antioquia.



## A New Class Is Initiated

THE 895 FRESHMEN of the Class of 1968 assembled for the first time at 9:30 A.M. last September 17 in Kresge Auditorium. They were a formally and conservatively dressed group, and at the outset they were reminded of the responsibilities and rigors to come.

"The experience that lies before you will repeat only in part the patterns of the past; because the world of your generation will differ profoundly from anything that man has known before," President Julius A. Stratton, '23, told them. This change, he said, will be the consequence of the revolution of science that is giving "new meanings and new dimensions to the whole of education."

M.I.T.'s curriculum, he continued, now gives them freedom to take advantage of "an extraordinary range" of opportunities. "This very real flexibility, perhaps more than any other quality, distinguishes your M.I.T. from the Institute that many of us knew in our undergraduate years." The freshmen applauded enthusiastically.

Dean Kenneth R. Wadleigh, '43, mentioned statistics showing that '68 was one of the youngest classes ever to come to the Institute and that it contained the largest number of girls, 46. They laughed when he remarked that a large number suffered from hay fever and when he welcomed them as members of the "bragging brotherhood" of M.I.T. students and Alumni. But "constructive dissatisfaction with the status quo is a good thing," he admonished them.

Next were conferences with Faculty advisers, and in the afternoon the freshmen saw the tools of modern science and technology in tours of Institute laboratories. Freshman Weekend also included a kind of scientific entertainment, "Introduction to Technology," in which some provocative problems of science were set forth. Edwin H. Land, President of the Polaroid Corp., lectured the new students on his theory of color vision; and Professor Jerome Y. Lettvin, '47, talked about animal camouflage, posing questions as to the similarity in perception between animals and humans and intriguing his audience with enigmatic pictures.

The Class of 1968 is one of the youngest in part because 18 members finished high school in three years; three new students are only 15. Yet scholastically the newcomers from U.S. schools outrank every previous



*THE CECIL AND IDA GREEN BUILDING was dedicated on October 2, and now houses the M.I.T. Center for the Earth Sciences. The building, its dedication, the center's activities, and the status and future of the earth sciences will be the topics of a series of special features in the December issue of the Technology Review.*



*A freshman consults Professor William Bertozzi, '53.*

entering class. Ninety-one per cent were from the top tenth of their high school classes; 287 achieved 800, the limit, on the advanced mathematics entrance test, and 338 entered M.I.T. with degree credit for advanced work. The class includes 171 high school valedictorians and 76 salutatorians.

The new freshmen come from every state except Nevada and from 24 foreign countries. Public schools sent 707, private schools 118, and foreign schools 70. In high school about one-third had major positions in musical or dramatic groups, 231 held top offices in civic, community, or religious groups, 213 were on school publications, and 197 won varsity sport letters.

Three freshmen have brothers at M.I.T. and 40 are children of M.I.T. Alumni. Five Faculty and staff members have sons in the freshman class. They are Professor Patrick M. Hurley, '40, Elmer J. Frey, '49, Vice-president Malcolm G. Kispert, '44, Professor Clifford G. Shull, and Richard S. Morse, '33. The daughters of Associate Professor Joseph A. Matthews and Professor Henry J. Zimmermann, '42, are members of the Class of 1968. David Rubin, '65, headed a student committee that helped plan Freshman Weekend, which closed with a reception for freshmen and parents by President and Mrs. Stratton.



# A NIGHT-WALK FROM ROMAN HILL TO CRUZ BAY

BY DONALD C. "SERAFFYN" MORK, '48

*The author was a wandering minstrel who died last April. All rights to this work are reserved by his heirs.*

We say that it's that we're used to riding,  
And screening night-sounds from our sleep,  
Because some of them bite  
(—and those morning sounds!)  
But if we liked night-walks  
I think we'd take more of them.  
They're too much for us to swallow.  
And I don't mean town-walks,  
Telling us how we mesh  
With commerce where ships are loaded  
Or meat redly carried in,  
How we mesh with life's own throb  
Where shadowed lovers play  
They're already in the hedge.  
I don't refer to town-walks  
On echoing wet cobbles  
That we, men, put there:  
Those, I say, are safe.

But who will plunge thru blackness  
'neath a star-high tamarind  
And a thousand swampy voices  
To drown your footfall?  
I mean a forest walk.  
Grown-ups aren't afraid  
Not of darkness, usually,  
Not even of the hedge  
Robberlike and sudden with its shadow—  
But those we can abide,  
And some voices.  
Rain's all right,

## Funds for Oral Science

DENTAL SCHOOL faculties need both dentists and bio-scientists who are grounded in the biological and physical sciences, which are being increasingly applied these days in studies of diseases of the mouth. M.I.T. does not run a dental school, but the Department of Nutrition and Food Science has an Oral Science Program to provide science-based graduate training.

A grant of \$440,000 made recently by the W. K. Kellogg Foundation of Battle Creek, Mich., will further the program. Professor Robert S. Harris, '28, directs the program, which was established last year under a grant of \$500,000 from the National Institute of Dental Health, a division of the Institutes of Health.

## A Light Spray

CHEMICAL REACTIONS that produce light are interesting to chemists as a scientific phenomenon, and chemiluminescence may very possibly have some practical applications. A nighttime rescue operation at sea, for example, might be carried out more easily if an area of the ocean's surface could be lighted by spraying it from the air with a chemiluminescent substance.

Chemists have studied such compounds for a long time and have given much attention to the mechanism that causes chemical reactions to produce light. Gener-

For it jams the animals  
From telling us we are one  
With them, and with the trees,  
Telling us, in the same dance,  
And with the stars.

The stars.  
We hesitate from entering  
Their solemn, whirling march.  
To look it in the face—  
Too much! like a sick beggar  
Whom you decide to nurse  
And whom you do not love—  
Not yet. A little time.  
Too much to answer for—  
Like having Christ to lunch—  
Their dance, and our part in it.

Not yet,  
To fall in with Arcturus,  
In grand procession, drawn  
By time's inexorable magnet.  
We ignore the summons to march,  
Or try to, drawn, yearning  
(No man invented yearning)  
Losing, dying, like leaves;  
Returning like leaves  
Through Milky Ways of seasons  
And of night-sounds, all  
In one awful timeless  
Instant of God's eye.

ally they have assumed, according to Assistant Professor David M. Hercules, '57, that oxygen was necessary to produce chemiluminescence in organic compounds. The first demonstration of a chemiluminescent reaction without oxygen was reported recently by Professor Hercules in *Science*. He experimented with a group of aromatic hydrocarbons, electrolyzing them in nonaqueous solvents in the absence of oxygen. Chemical species produced during electrolysis of the solutions emitted a chemiluminescent glow which, Professor Hercules said, was quenched rather than enhanced by oxygen.

## The Underwood-Prescott Award

EMIL MARCEL MRAK, Chancellor of the University of California at Davis, is considered the first scientist to bring together the agricultural sciences and the principles of food processing into one co-ordinated body of knowledge. In recognition of this achievement, Dr. Mrak has been selected to receive the 1964 Underwood-Prescott Memorial Award for work in food science.

The award was established last year by the William Underwood Company and M.I.T. It was named for the late William L. Underwood, '98, and Samuel C. Prescott, '94, who revolutionized the canning industry when they demonstrated in 1895 that bacteria caused spoilage of canned goods.



# The Alumni's Officers Come Back to School

*They see the increasing depth of teaching and research, and the importance of their help in the coming, decisive decade*



**T**HE FIFTH M.I.T. Alumni Officers' Conference—and the largest one yet—brought 380 leaders in Classes from 1891 to 1964 back to the Cambridge campus. Their two-day gathering, September 11 and 12, gave them a multi-faceted view of their ever-changing alma mater, and the importance of her graduates' activities to her, both now and in the future.

*Samuel A. Groves, '34*, chairman of the conference, opened it by noting the Institute's uniqueness, the worldwide impact of its pioneering, and the coherence of the Alumni Association's program. *Donald F. Carpenter, '22*, the Association's President, called attention at the final session to the increases since he was an undergraduate in the Faculty, the facilities, and the dormitories; the numbers of graduate, women, and foreign students; and the emphasis on science, humanities, and management in addition to engineering. M.I.T. was "tops" in the

1920's, Mr. Carpenter declared, and it is now "supertops."

President *Julius A. Stratton, '23*, also recalled the 1920's while describing the present structure of the Institute. Then, he said, its structure was relatively simple and monolithic. Now both the range of professors' interests and the variety of missions undertaken have increased. These and other changes, he pointed out, have heightened the complexity of the Institute's relationships with students, graduates, the community, industry, and government.

Dr. Stratton presided throughout an afternoon devoted to reviewing M.I.T.'s plans for the future, at which:

- *Roland B. Greeley*, Director of Admissions, showed with charts the greater aptitudes that freshmen now bring to the Institute;
- *Sanborn C. Brown, '44*, Associate Dean of the Graduate School, traced the rise in the graduate stu-

**The first class called to order in the new Green building lecture hall consisted of Alumni. Chester Dawes, '09, is shown entering to listen to Professor Patrick M. Hurley, '40.**

dent population, and declared that the basic emphasis at M.I.T. must continue to be on quality.

► Provost *Charles H. Townes* discussed the problems of choosing and integrating the material presented to today's students, and spoke of the need for more planning of the curriculum and intensive study of the educational process;

► *Kenneth R. Wadleigh, '43*, Dean of Student Affairs, described the numerous changes in the students' life on campus; and

► *Philip A. Stoddard, '40*, Vice-president—Operations and Personnel, covered the growth of the physical plant, evidence of which surrounded the visiting Alumni.

Further insight into the nature of education at M.I.T. now was pro-

vided that evening when *William W. Seifert*, '47, Assistant Dean of the School of Engineering, and *Robert W. Mann*, '50, Professor of Mechanical Engineering, introduced students who presented ideas they had worked out for an Advanced Orbiting Astrophysical Observatory and a new kind of commuting car and road (see *Technology Review*, July, 1964, pages 29 and 31).

The next morning the bells rang at 9, as usual, and the Alumni trooped into the 20-story Green building as the first class to meet in its main lecture hall. There Professor *Patrick M. Hurley*, '40, took them to the rock bottom of much current research in a talk on "The Evolution of the Earth Sciences." *George W. Clark*, '52, Associate Professor of Physics, next led the class into astronomy by explaining how instruments aboard space vehicles are measuring x-rays and gamma rays. *Herbert M. Teager*, '52, Associate Professor of Electrical Engineering, then concluded the morning of lecture demonstrations by reviewing recent developments involving computers. *Francis M. Mead*, '29, of the Association's Executive Committee, presided during this exercise in continuing education.

Alumni Association activities were reviewed, debated, and forecast throughout another forenoon. *D. Reid Weedon, Jr.*, '41, chairman of the Alumni Fund Board, announced then that the Fund's goal this coming year would be \$1,500,000, and *Donald P. Severance*, '38,

Executive Vice-President, predicted that the Association's tenth decade, now beginning, would be its most decisive decade.

The age distribution of Alumni is moving downward, and the number of graduates having advanced, but not bachelor's, degrees from M.I.T. is going up, Mr. Severance pointed out. These and other trends both within the Institute and throughout the world, he said, have prompted the Association's leaders to stress:

► The so-called "one-tent concept," by co-ordinating all alumni efforts, including those of the Educational Council, the clubs, and Fund workers, more closely—both on the campus and away from Cambridge. ► The addition to the "Three F's" of familiar alumni activities—for Friendship, Freshmen, and Funds—of a fourth "F" for Fulfillment of a university graduate's potential.

"The Class of 1964 has the knowledge and the techniques," he declared, "but the classes of 1954, 1944, or 1934 have the experience and the prestige that gets things done. M.I.T. graduates could contribute more to the common account and have a fuller life if something could be done to lengthen their professional half-lives and to help them cultivate new interests, new backgrounds, and new involvements."

Many universities, he continued, have begun to devote money and effort to continuing alumni education. Both attitudes and techniques are changing swiftly, and "if we at M.I.T. take this tide now at its flood,

we stand to lead all other alumni associations in the country."

At separate sessions for alumni officers whose work is mainly class-oriented (moderated by *George J. Schwartz*, Vice-president of the Class of 1942) and those in geographically oriented work (moderated by Executive Committeeman *William S. Edgerly*, '49) members of the Association's staff summarized recent accomplishments and discussed their hopes for the next decade. *Frederick G. Lehmann*, '51, Secretary, and *Thomas P. Pitre*, Director for Clubs, spoke of meetings and programs; *D. Hugh Darden*, retiring Director of the Educational Council, covered its work; *Volta Torrey*, Publisher and Editor, and *William T. Struble*, Managing Editor, spoke for the *Technology Review*; and *Henry B. Kane*, '24, Alumni Fund Director, and his associates, *Douglas F. G. Haven*, '52, and *Kenneth S. Brock*, '48, traced the Fund's record and outlined its leaders' plans for the future.

A sudden heavy shower disrupted a reception as it got under way in the court of the Hayden Library, but students moved things indoors.

Alumni meetings are of enormous value to the administration of the Institute, *James R. Killian, Jr.*, '26, Chairman of the Corporation, told the Association's officers at the closing session of their conference. By bringing to focus the thoughts of Alumni, he said, the Association is helping to make the Institute "an organization of great strength."



Windows on both sides flood the Green building lecture hall with light. Projection booth extends across rear. In fore-

ground are new devices used in astronomy. *Francis M. Mead*, '29, introduced lecturers to alumni class.



# The Alumni Fund Looks Ahead

*Its 1965 goal is \$1,500,000 from 20,000 donors,  
a target well within 52,000 M.I.T. men's means*

BY D. REID WEEDON, JR., '41

*Chairman of the Alumni Fund Board*

**I**N 1940-1941, the M.I.T. Alumni Fund's first year, H. B. Richmond, '14, then Fund Board Chairman, commented on the "great achievement" of \$65,000 with the hope that some day \$150,000 might be possible. To the everlasting fortune of M.I.T., his expectations were soon achieved and surpassed. The Alumni Fund has been a major benefactor in Baker House, Hayden Library, Compton Laboratories, Burton House, and the new Student Center—while helping hundreds of students through scholarships and loans. It has become one of M.I.T.'s major sources of urgently needed unrestricted money and has enabled thousands of Alumni to make common cause for the good of their heirs. It has accomplished these within the policies that:

- ▶ no Alumni Fund money is used to defray M.I.T. operating expenses, and
- ▶ wherever possible, Alumni Fund proceeds are invested in the student and his environment.

Many have asked—naturally—"where will the money be used?" Some of it, of course, is used to maintain the Fund's scholarship program. Some is earmarked for special purposes designated by the donor. But, for the remainder, a specific answer is not so easily given—and this, strangely enough, is as it should be.

The Alumni Fund aims at maximizing unrestricted money—a resource that M.I.T. is free to apply to the need it finds most urgent at the time. It is often a "leverage fund" providing the additional dollars to enable a program or facility to be consummated as originally planned. Unrestricted gifts are especially valuable.

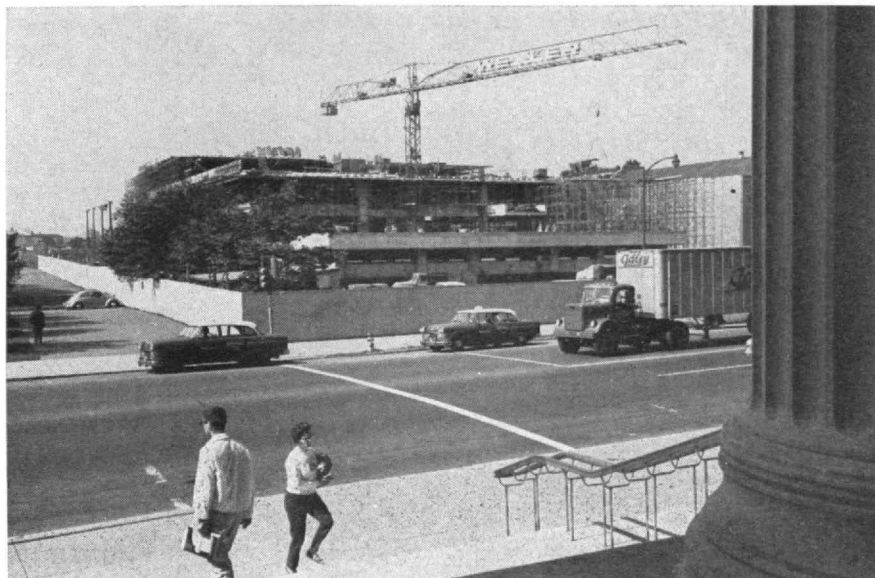
Consequently, the Fund Board neither can nor desires to specify the exact allocation. Student Center? Dormitories? Student Aid? Student Activities? Teaching? Alumni Fund money can indeed be allocated to all of these, or to but one or two—as the need and priorities exist at the time. The very flexibility of this policy is the Fund's greatest contribution to M.I.T.

This coming year, 1965, is the 25th Anniversary of our Alumni Fund and, concurrently, the Alumni Fund Board has established the challenging goal of \$1,500,000 from 20,000 Alumni. In these days when all of us are beset with appeals from many sides, and each appeal has a larger goal than the year before, the board would be remiss in not reporting to you the reasoning behind its seemingly audacious action.

That M.I.T. occupies a unique position in the educational firmament seems unquestioned; that its Faculty constantly grows in stature, its students in quality, and



A materials building is going up near the main M.I.T. buildings.



From the Massachusetts Avenue steps, the view is changing, too, as the Student Center rises this fall with help from the Alumni Fund.

its Alumni in accomplishment are also reasonably evident. But often we neglect to recognize that M.I.T. is a *private* institution, financed by *private* means, which because of its very *privateness*, has a freedom to experiment, lead, and contribute to both our private and public lives. It is, therefore, the concept of independence that must be before us.

Then, we must be always conscious of time. Five years ago M.I.T. announced the start of the Second Century Fund, which at the time culminated in a capital fund record for all colleges and universities. But it is evident that the needs towards which the SCF were directed were present *before* the program got under way; it is equally evident that the facilities the SCF provided are just now going "on stream" and beginning to make their full impact on students. Couple these with the apparent "speed-up" in technical discovery, and the shrinking distance between discovery and practical application, and there soon becomes an urgency for programs not even considered five or seven years ago.

If M.I.T. is to retain its independence, if it is to respond to the ever-faster pace of science and engineering, and if it is to maintain its pre-eminence, it clearly must have the wherewithal to do so. It is this responsibility that is behind the Fund Board's decision.

As has been reported to all Alumni, 1964 saw the magnificent achievement of \$968,880 from slightly less than 15,000 Alumni. This was half again as much as the largest previous Alumni Fund, 1960, and twice its predecessor, 1963. The 1964 record cannot be gainsaid. But wouldn't we be remiss if we did not inspect it more closely?

One out of 10 Alumni gave \$100 or more—a 25 per cent growth over previous highs. But are there not many who made only token gifts who could have given \$100—or even \$1,000 or more?

The average gift of nearly \$65 is also a record—and a wonderful one. But how many, *who could easily do so*, didn't give even the average?

Our 14,971 contributors are superb evidence of alumni loyalty, in comparison with most other universities. Yet our percentage participation is exceeded by many others. There are 52,000-plus living Alumni, including those who received undergraduate degrees, graduate degrees only, and many with no degrees. About 30,000 of these have, at one time or another, given to the Fund. Cannot 20,000 contributors be a realistic objective?

So let us recapitulate:

- The 1964 Fund totaled \$968,880, and
- 5,029 more contributors at \$75 each would bring in \$377,175,
- making the amount needed from last year's donors able and willing to increase their giving, \$153,945.

With this rationale and these data, the \$1,500,000 goal is well within our means. It is not a figure that should dismay us; rather its very attainability should be an inspiration for us to labor for it.

"If we don't, why should others try?" In effect, this is the essence of annual giving. We, M.I.T.'s Alumni, are best equipped to serve our alma mater, and we make an annual witness of our conviction. If we fail, there is no alternative to massive capital programs or help from other sources which would mean a surrender of our freedom. Conversely, our success can provide a continuum of new resources that enables the Institute to concentrate its fullest energies on its primary mission: a unique education for young men and women.

Last fall, James R. Killian, Jr., '26, challenged the Alumni Fund in its quest for \$1,000,000 as follows: "The elevation of the Alumni Fund to this higher plateau can be a major step in making the Fund and its great volunteer organization the principal means through which the general body of Alumni, under all circumstances, make their contributions to the Institute." Alumni did respond—magnificently—and the 1965 goal is the natural next step. Dr. Killian's challenge and statement is clear: our primary channel of giving to M.I.T. is through the Alumni Fund. Annual thoughtful gifts are called for. In short, the Alumnus whose Alumni Fund gift is generous and thoughtful, according to his means, is doing his part. M.I.T. asks no more.

To achieve the twin goals of \$1,500,000 and 20,000 contributors will, of course, require hard work. About 3,000 alumni volunteers will carry the load; if you are asked, accept the responsibility! It is also obvious that several large gifts will be needed. The following chart indicates a distribution of gifts which will enable us to reach our goal:

Range of Gifts	Number Needed	Amount
\$50,000 & over	2	\$100,000
25,000-49,999	6	150,000
10,000-24,999	15	150,000
5,000- 9,999	23	115,000
1,000- 4,999	180	180,000
500- 999	225	112,500
100- 499	2,175	217,500
All Other	17,374	475,000
	20,000	\$1,500,000

The Alumni Fund will be conducting a Special Gifts program in the fall, and Regional Solicitation in the spring. Alumni will hear from their class agents and occasionally from M.I.T. directly. Additionally, many reunion classes will be at work. These programs complement one another and no Alumnus is solicited after he gives. These programs, however, are only tools—the ultimate success of the Fund is in the heart of each of us.

Each of us attributes different values to his M.I.T. education. But, regardless of our assessment, the fact is that M.I.T.'s current excellence has a direct relationship to us. The quality of today's graduates and their future contributions to society make our own education more meaningful with each passing year. Our gifts help insure that this will continue.

# In Recognition Of Great Service

**B**RONZE BEAVER awards, given in recognition of "exceptional service to M.I.T. and to its Alumni Association," were presented to 11 Alumni at the Fifth Alumni Officers' Conference. Seven of the honored men received their awards in person from Donald F. Carpenter, '22, President of the Alumni Association, at a dinner on September 11 in Walker Memorial. They are pictured here and on the next page.

Four recipients were unable to attend the conference: *Donald G. Robbins, '07*, who was cited for his efforts as class president and regional and special gifts chairman of the Alumni Fund; *Robert Welles, '15*, who has been regional chairman of the Los Angeles Educational Council, Alumni Fund regional chairman, and a leader of the M.I.T. Club of Southern California; *Gaynor H. Langsdorf, '32*, who demonstrated "remarkable organizational abilities" as area chairman for the Second Century Fund in San Francisco and as regional chairman for the Bay Area Educational Council; and *Sterling H. Ivison, Jr., '41*, who has held his offices "with such distinction" that the M.I.T. Club of Washington has become a model of alumni activities.



*PARKE D. APPEL, '22—President of his class, member of the Alumni Fund Board, his leadership resulted in the largest class reunion gift in M.I.T. history and the establishment of the Class of 1922 Endowed Professorship for Excellence in Teaching.*

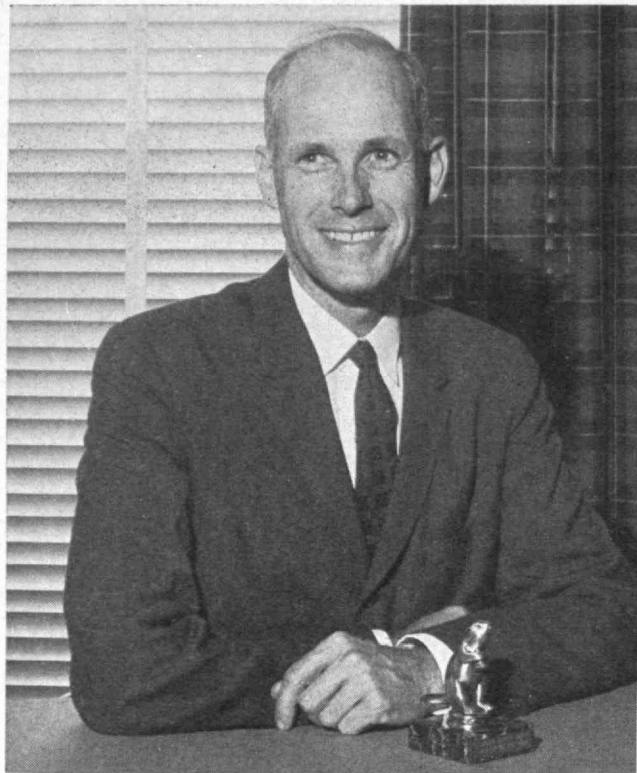


*THEODORE A. MANGELSDORF, '26—Member of the M.I.T. Corporation, able engineer and corporation executive. As principal architect and first chairman of the M.I.T. Alumni Center of New York, he pioneered a program that set a precedent among universities.*



*PHILIP H. PETERS, '37—President of his class and newly elected Vice-president of the Alumni Association. Long a participant and leader in many alumni activities, he worked tirelessly for the Second Century Fund as chairman of the Area Organization.*





*D. REID WEEDON, JR., '41—Alumni Term Member of the M.I.T. Corporation, chairman of the Alumni Fund Board, and former President of the Alumni Association, he is an innovator whose tireless efforts raised the Alumni Fund to the million-dollar level.*



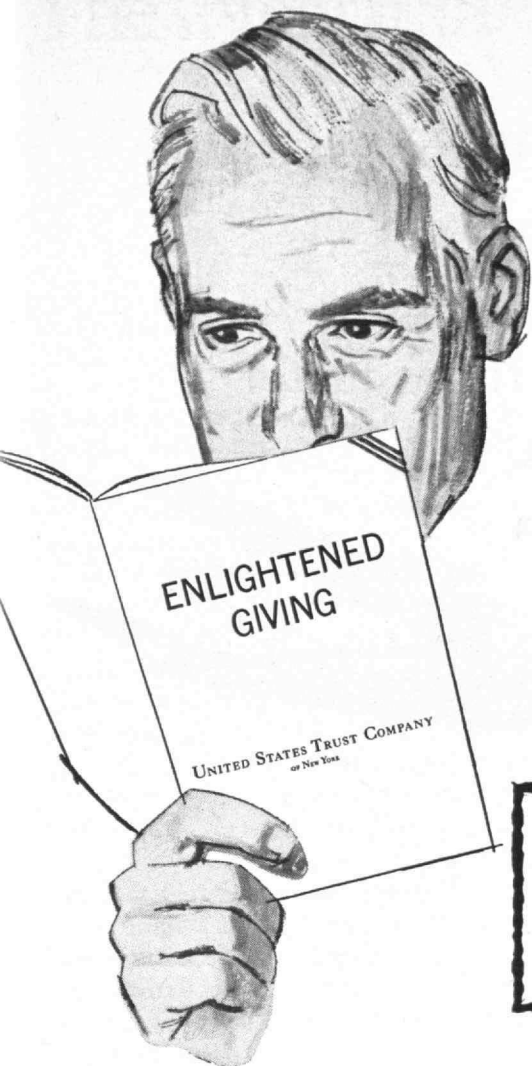
*H. B. RICHMOND, '14—Life Member of the Corporation, Emeritus, he has been secretary of his class and president of the Alumni Association. As first chairman of the Alumni Fund Board, he laid the base for the development of the Alumni Fund.*



*GEORGE WARREN SMITH, '26—He has served as chairman of the Alumni Fund Board, of Alumni Day, and as member of the Alumni Association's Executive Committee. As Secretary of his class, he has written a bright chronicle of his classmates for 15 years.*



*JOSEPH WENICK, '21—Long-time Treasurer of the M.I.T. Club of Northern New Jersey, member of the Educational Council, and member-at-large of the Alumni Council. His loyalty and tireless attention to detail assured the success of many alumni efforts.*



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We have a brochure which reviews methods of making charitable gifts and their consequences. If you would like to have it, please write or telephone for a copy of "Enlightened Giving."

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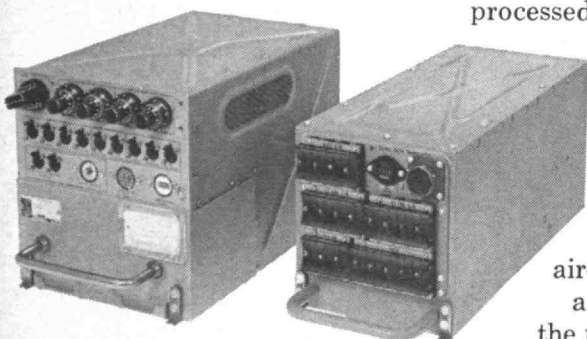
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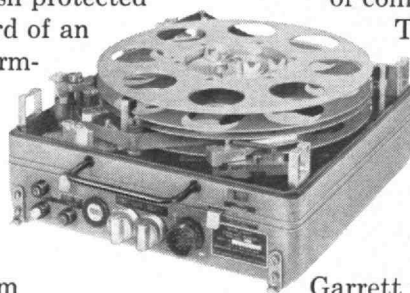
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# The Negro at the College Door

*To make full use of his intellectual potential, his handicaps should be recognized and removed*

By Whitney M. Young, Jr.

FOR PEOPLE desperately seeking answers to the civil rights and other problems that face us today—whether in employment, race relations, or automation—the panacea seems to be education. Both the expert and the man on the street seize on this as the remedy for the difficulties that besiege us.

Acknowledging that there is validity in the overriding value of education, it is particularly appropriate that we face up to the extent to which the Negro citizen has been historically and currently deprived. Statistics reveal that in spite of heralded progress the average Negro youngster receives three and one-half years less schooling than the average white child. When one considers that the bulk of elementary training for the Negro child is received in inferior, segregated, slum schools—North and South—then the real difference is more accurately five years.

At the college level we find that of 4,000,000 students enrolled only 220,000 are Negroes and 90,000 of these are on the campuses of the so-called Negro colleges. I say so-called, because the charters of most of these institutions are purposely nondiscriminatory. Furthermore, at most of these colleges white students and faculty members are to be found.

Many schools of higher education in the South labeled for so long as “Negro colleges” will continue to play a significant role in the education of young people. Many of these schools today represent the major, if not the only, centers of cultural influence existing in some communities for white as well as Negro citizens. This role will expand. In addition, the number of white students and foreign students in these institutions will increase beyond their present enrollment and interracial faculties will become more commonplace. There is a healthy trend toward the development of more co-operative faculty exchange programs with other leading universities as a spur to greater academic growth. It is, therefore, unreasonable to suppose that these institutions will disappear at a time when the nation is faced with a serious shortage of classroom facilities.

There is a vital need for greater financial support of these schools. When one considers, for example, that the \$3 million goal of the United Negro College Fund

MR. YOUNG is executive director of the National Urban League, and this article was drawn from his recent book, “To Be Equal.” After studying electrical engineering at M.I.T. in 1943, he obtained a master’s degree in social work at the University of Minnesota. He was dean of the Atlanta University School of Social Work for seven years before assuming his present post.

must be distributed among more than 33 institutions as compared with the fact that many single institutions in this country receive several million dollars each, the enormous gaps and needs in educational quality come into sharp focus.

Now the 116 “Negro colleges” have their problems—lack of money is the main one—but bias is not generally one of them. It is their sister institutions around the country that deserve comment.

I believe, with Cardinal Newman, that: “A University is not a school or a group of schools. It is an atmosphere.” Anyone who has studied or taught at the college level knows well that the student body of an academic community does create an intellectual atmosphere. It is to make this atmosphere relevant to the Twentieth Cen-



Professor Jerrold R. Zacharias (left) was chairman of a conference held at M.I.T. last spring on steps to assist the predominantly Negro colleges and universities.

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tury that integration of Negroes into the teaching and learning groups is necessary.

This is no time for colleges and universities to adopt a posture of fine impartiality and simply announce: "We are now open to Negroes." After these institutions have for scores of years consistently rejected Negroes extraordinary courage would be required of any Negro youngster who might entertain thoughts of sending in an application. Negroes are not likely to seek out colleges of which they have never heard, at which they are unsure of their reception. Therefore, the institutions that are serious about wanting Negro students must develop techniques of going out, seeking Negroes with potential, preparing them to meet the qualifications, and helping them over the financial hurdles. None of these factors is so mysterious as to defy solution by the aggregations of intelligence we have on campuses in this country. Some notable efforts are already under way. Northeastern University is recruiting promising Negro students with a \$150,000 grant from the Fund for Advancement of Education. The program will enroll 20 Negro students for each of the next three years.

The American Council on Education has at last recognized its leadership responsibility in this field. It has decided to help develop projects and studies to speed and expand opportunities for Negroes in higher education. Also, it plans to serve as a national clearinghouse for information about local, state, federal, and private efforts to equalize educational opportunities.

Clearly, with the Negro student certain handicaps are to be expected, recognized, and overcome. The Negro freshman is usually less well prepared than his white counterpart for college life. His achievement level may be at the 10th grade level. He is unfamiliar with taking tests and the tests are, by their design and content, weighted against him. (The Graduate Record examination in the social sciences, for instance, recently contained no question about Negroes or Africa.) He may be unaware of the handicap of his inferior high school education, and the full realization may strike him with possibly traumatic effect. He may not realize the standards of excellence he will have to maintain and how these compare nationally with other colleges. He is generally less well informed about the nation and the world than his white counterpart. He will require more counseling and special help in catching up, keeping up, directing himself, and preparing himself for a career.

However, the colleges should keep in mind certain facts. One is that a follow-up study of college records indicates that Negro students are likely to be better achievers than their aptitude tests predict. Such tests tend to reflect not what they can learn but what they have learned. Another fact, and an alarming one, is the high dropout rate for Negro college students. This in large measure is attributable to the problems cited above; it indicates the urgent need for counseling and special effort by the institution.

More and more we hear discussed the theory that investment in human capital is perhaps as important as,

if not more important than, investment in mechanical and technological equipment. Economists Harbison and Myers, in their book *Education, Manpower and Economic Growth*, state that human resource development is a more reliable indicator of national development than any other, including industrial capacity. They, following the lead of Professor Theodore W. Schultz, consider investment in education and training the most promising use of a nation's capital.

Professor Schultz, in his widely quoted presidential address to the American Economic Association in 1960, concluded with these recommendations for investing in human capital in America:

1. Removal of hindrances to free choice of professions, such as racial and religious discrimination.
2. Long-term loans to students.
3. Larger investments in the health and education of disadvantaged Americans.
4. Retraining of workers displaced by technological changes.
5. Encouragement of able youths to invest in themselves, especially through higher education.

Because the Negro intellectual potential has so long been ignored as a field for this kind of investment, I enthusiastically endorse Professor Schultz's recommendations and urge them on all those who may have opportunities to implement them.

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NEW BOOKS likely to be of especial interest to many M.I.T. Alumni have included:

*Capital Formation and Economic Development* (Studies in the Economic Development of India), edited by Professor P. N. Rosenstein-Rodan, with Richard S. Eckaus, '54, and Louis Lefebvre, '57, among its contributors (The M.I.T. Press, \$5).

*Developments in Heat Transfer*, edited by Professor W. M. Rohsenow, with contributions by J. C. Chato, '60, H. Fenech, '57, S. I. Freedman, '56, Peter Griffith, '56, J. J. Henry, '59, H. C. Hottel, '24, W. T. Lawrence, W. Craig Moffatt, '61, R. J. Nickerson, '49, A. F. Sarofim, '57, S. M. Scala, S. A. Schaaf, and S. P. Sukhatme, '60 (The M.I.T. Press, \$15).

*Pricing and Fiscal Policies, A Study in Method* (Studies in the Economic Development of India), edited by Professor P. N. Rosenstein-Rodan, with Louis Lefebvre, '57, among its contributors (The M.I.T. Press, \$6).

*The Random Character of Stock Market Prices*, edited by Paul H. Cootner, '53, Associate Professor of Finance in the Alfred P. Sloan School of Management, including contributions by Richard J. Kruizenga, '56, and many others (The M.I.T. Press, \$15).

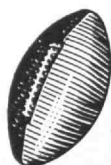
*Resource Acquisition in Corporate Growth*, by David W. Packer, '59 (The M.I.T. Press, \$6).

*Space Exploration*, edited by Donald P. LeGalley and John W. McKee, with contributions by William W. Kellogg, '42, Maxwell W. Hunter, 2d, '44, Morris Tupper, '48, Louis B. C. Fong, '35, and others (The McGraw-Hill Book Co., \$17.50).



New England Life agent Norm Masters (Michigan State, '56) discusses a Key Man insurance proposal with Nelson Mulligan (center) and son Patrick. The senior Mr. Mulligan is owner of the world's largest Mercury dealership.

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## New Books

**THE CHICAGO SCHOOL OF ARCHITECTURE, A History of Commercial and Public Building in the Chicago Area, 1875-1925**, by Carl W. Condit (*University of Chicago Press*, \$8.50).

**Reviewed by Stanford O. Anderson**, *Assistant Professor of the History of Architecture at M.I.T.*

THE ARCHITECTS of Chicago created in the decades around 1900 what is surely the most magnificent, richly varied, and yet isolable group of buildings in America. An intense study of this important phenomenon is most welcome. *The Chicago School of Architecture* is a much enlarged version of Professor Condit's *The Rise of the Skyscraper*, published in 1952. This helps to explain that the author's sympathies are primarily with those architects and engineers who developed the technique and the technically expressive form of the tall building. When a clarifying term is needed to replace "architecture," it is "the structural art." Consequently the book is rich in specification of structural characteristics and discussion of the degree to which these characteristics can be "read" from the physiognomy of the building. Although the words "functional" and "utilitarian" are words of approbation, the book

illustrates only one floor plan against which the reader can check these claims. Only a few sections are published; the sensation of architectural space is rarely discussed, symbolism or iconography only occasionally. Nevertheless, if one will consent to conceive of architecture within the rather narrow terms of the author, this is a highly informative work.

An unusually extended and sympathetic study of an "artistic" architect, and a fine contribution to the literature of architecture, is Condit's assessment of Louis Sullivan, '74 (pages 167-173). The author's insistence on the role of "architectural myth" in Sullivan's work is excellent; an interpretation which he unfortunately obscures momentarily by also asserting Sullivan's affinities with pragmatism and radical empiricism. It would appear that these affinities should be reserved for the more strictly utilitarian architects of the "commercial style."

The following quotation reveals the lack of sympathy which the author feels for the work of Frank Lloyd Wright: "The debt of Wright and his fellow spirits to the Chicago movement was essentially an aesthetic one translated into unique and personal and sometimes capricious terms. The great question, still largely unanswered by the historians, is why this brilliant and vigorous development [the Chicago School of c. 1880-1900] should have contracted very nearly to the unpredictable talents of a single man."

Had Professor Condit provided illustrations and concerted discussion of the River Forest Golf Club, the

(Concluded on page 48)

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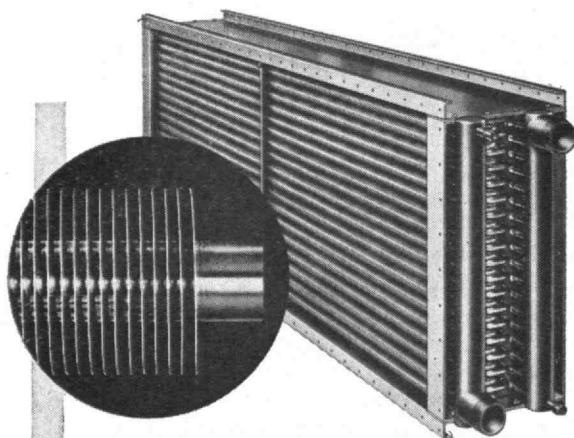
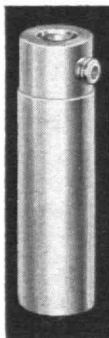
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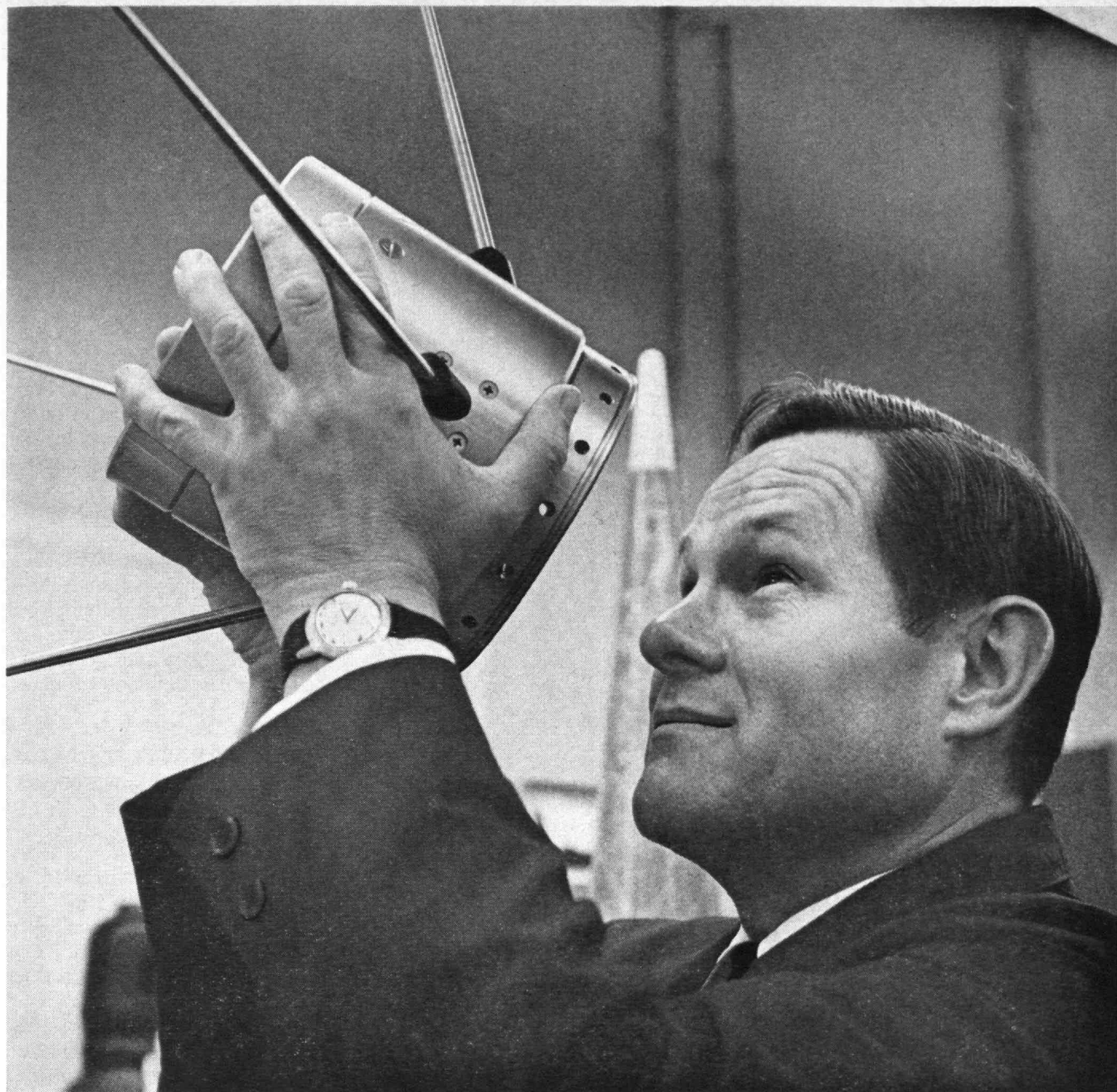
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## New Books

(Concluded from page 46)

E-Z Polish factory, Unity Church in Oak Park, and Midway Gardens (all works by Wright which meet all the conditions of the subtitle of Condit's book), the Larkin Building (in Buffalo, but a very important work of the Chicago school), and some of Wright's immensely significant houses, it would be much easier to evaluate the above assessment of Wright. Also Condit might then have been the historian to answer his "great question."

The excuse offered in the preface, that Wright has been extensively studied, does not seem to justify the virtual omission (one illustration, of the Francis Apartments, and no extended discussion) of this great architect from a history of the Chicago school. Certainly one cannot hope to have the reader understand the rather generous coverage given to lesser "Prairie school" architects without a prior exposition and interpretation of Wright's work.

The Chicago school provides what may well be the best historical laboratory we have for studying the recurring amalgamations of traditional or vernacular techniques and forms, structural and formal innovation, utilitarian and functional needs, and both the empirical and conjectural ordering of the complexities of architectural design. Professor Condit's book adds generously to our laboratory supplies; at its best, it initiates some of the experiments.

**CANDIDATES, ISSUES AND STRATEGIES**, by **Professor Ithiel de Sola Pool** of M.I.T., **Professor Robert P. Abelson** of Yale, and **Samuel Popkin**, '63 (*The M.I.T. Press*, \$5.95).

COMPUTER simulation was used to test theories of voters' behavior for the Democratic party in 1960. The work became the subject of numerous articles, and even fiction, that the authors consider "lurid fantasies." This book was written to correct them. The authors further explain in Chapter 1:

"Pre-election polling with scientific sampling was first applied to a Presidential campaign in 1936. By 1960, scientific polling, which George Gallup had pioneered a quarter of a century earlier, had become part of the normal arsenal of every major candidate. It was by that time a conventional operation. Scores of national surveys were conducted every year sponsored by candidates, by the mass media, and by private interest groups. Polls were even being collected in a special library, The Roper Public Opinion Research Center in Williamstown, Massachusetts, where most of the national polling organizations deposit their old IBM cards. Polling had come of age.

"In 1960 with the aid of the public opinion poll data thus being accumulated, and with the use of computers, a new research technique—simulation—came onto the scene. A description of its first and primitive political use in 1960 is the subject of this monograph. How soon and how fully this new instrument will become assimilated into the normal practice of politicians and of political scientists time alone will tell, but the limited experience of the first experiment already limns broadly a visage of the future."





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# Institute Yesteryears

As recalled by the late H. E. Lobdell, '17



## 25 Years Ago

THE INSTITUTE mourned the passing of *Henry Smith Pritchett*, its 5th President, from 1900 to 1907, at Santa Barbara, Calif., on August 28, 1939.

► Registrar *J. C. MacKinnon*, '13, made public that total enrollment for 1939-1940 reached 3,100 (up seven from 1938-1939), including 729 (up 29) in the Graduate School and 605 (down 51) freshmen of the Class of 1943.

► In his 6th Annual Report, covering fiscal 1938-1939, Treasurer *Horace S. Ford* "laid stress upon the fact that the budget adopted for the year [had] contemplated a deficit of some \$50,000 which, it was planned, should be met by a draft on the Income Equalization Reserve Fund. Only half of this expected

draft was necessary, however, to balance the budget. The all-time operating surplus [accumulative since 1865] now stands at the large sum of \$516.85 . . ."

► The Review reported: "Promotion of *Charles S. Draper*, '26, internationally known authority on airplane testing devices and flight instruments, to the rank of Professor of Aeronautical Engineering, was the chief change in the Institute's Faculty Roster as the year began . . ."

## 50 Years Ago

For 1914-1915 registration was up 131 over the previous year, to 1,816.

► Stone & Webster's vouchers covering the first 14 months' expenditures for the construction of the New Technology, up to November 1, 1914, totaled \$1,129,935.44.

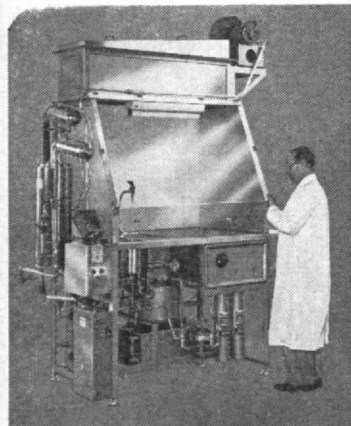
Progress visible above ground had been delayed because of engineering problems connected with the foundations and, as The Review reported, "it was not until well along in August" that work on the superstructures was under way.

"But in the meantime," the account continued, "preparations for expeditious building operations had been thoroughly made so that the 10,000 carloads of material required for the great edifice could be handled effectively. These preparations included 7,000 feet of railroad track for distributing materials at the places where they are to be used, a special locomotive crane, together with an arrangement of conveyors and mixers, by means of which the making of the cement [is] practically a continuous process, the chutes of the construction towers delivering without cessation a liquid lake of cement covering an acre at an operation."

## 75 Years Ago

REGISTRATION for 1889-1890 totaled 909, an increase of 82, or 10 per cent over 1888-1889.

(Concluded on page 52)



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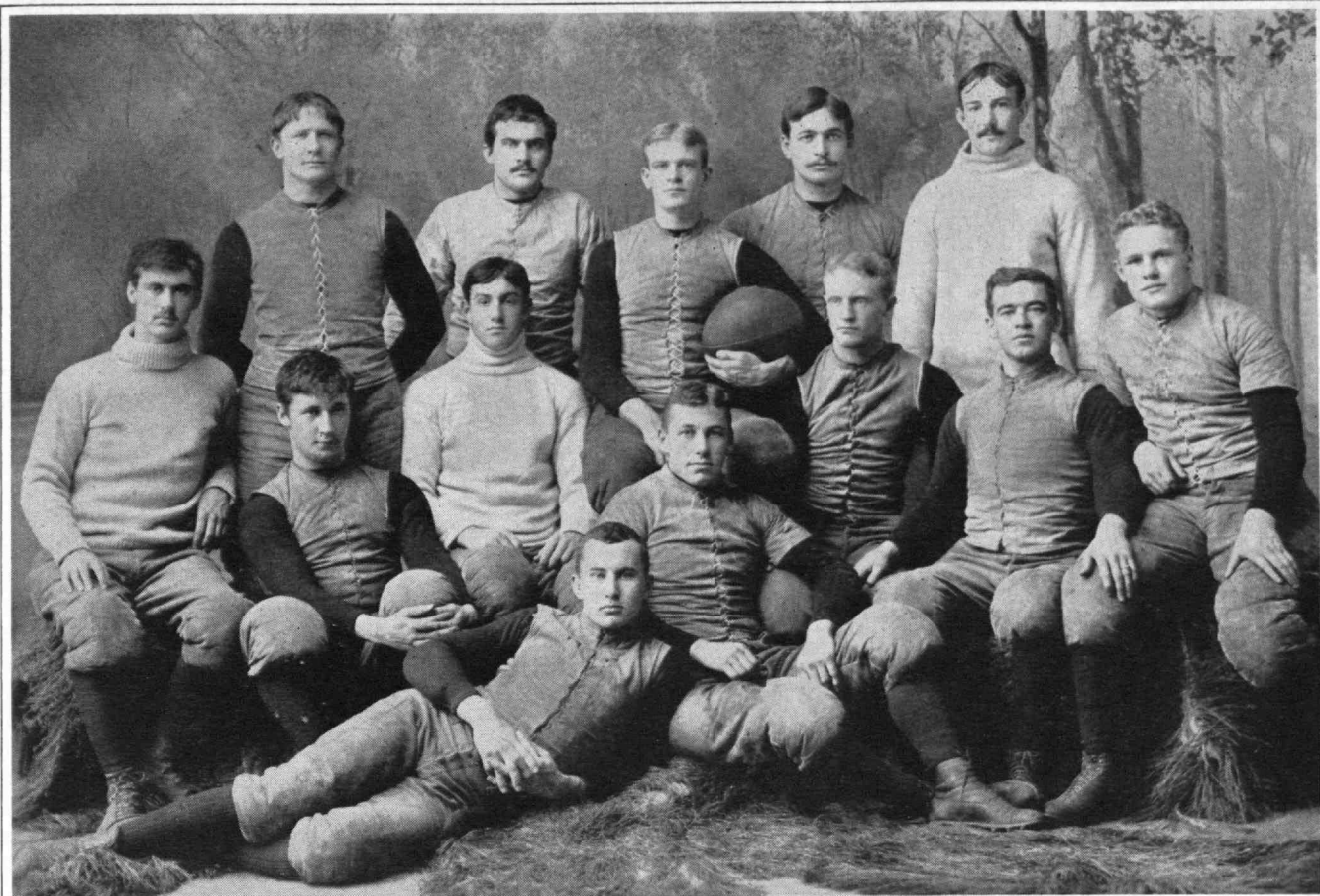
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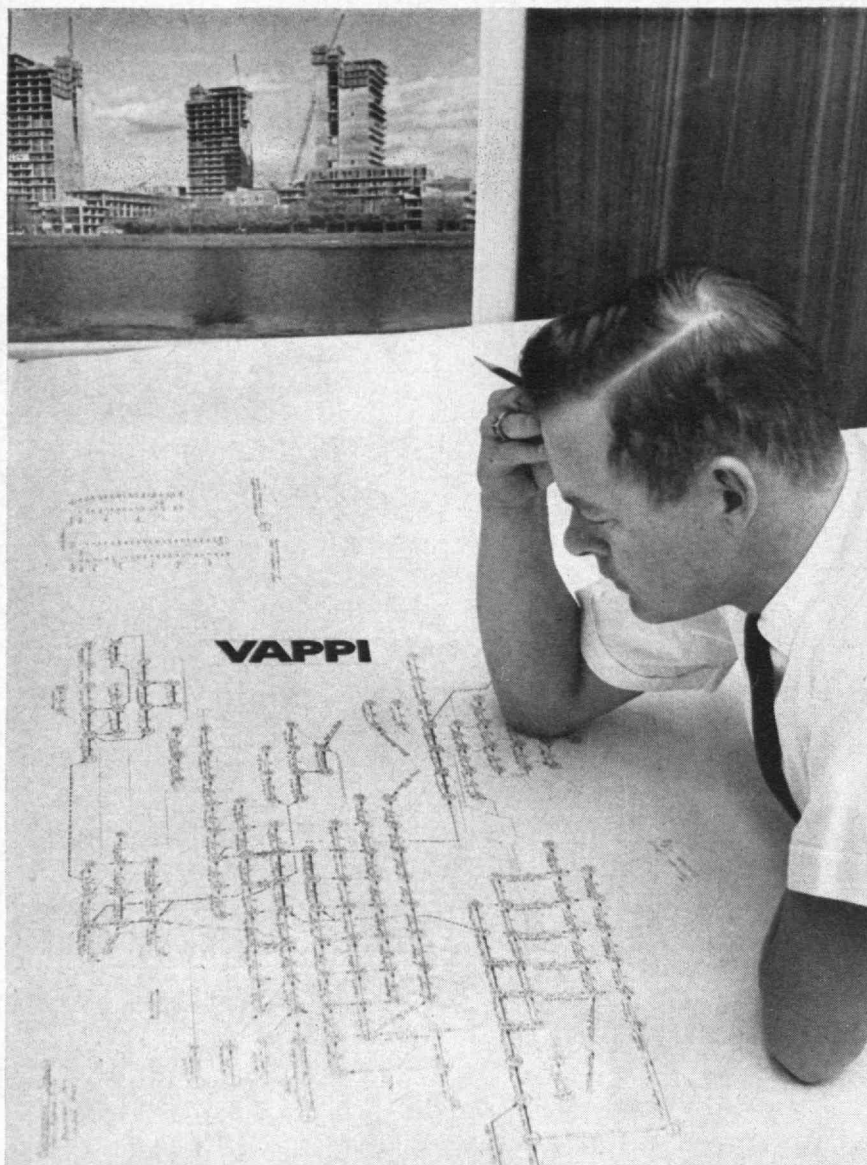
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## 75 Years Ago

(Concluded from page 50)

► As the term began, the editor of *The Tech* put in print his resolve to turn over a new leaf, to wit: "President Harrison and the members of his Cabinet have returned to Washington, the retail dry goods clerk feels poor after a two weeks' vacation, the society people of the Back Bay have left their cottages at Lenox for their city dwellings on the 'Avenue,' the policeman on our beat has exchanged his gray helmet for a black one, and the electric lights begin to twinkle earlier than they did two months ago.

"All of the above occurrences, together with a crowd of sun-burned students gathered in the corridors of Old Rogers, tell us that summer has waned, that autumn and the football season are here, and that winter is not far distant. The majority of us, either just from home or our summer's work, are full of good resolutions as to the studying to be done this year, and we have agreed with our intimates that 'we won't waste as much time as we did last.'"

► Beginning with 1889-1890, Course XI, Sanitary Engineering, was added to the Institute's curricula; and from it later six members of the Class of 1892 were graduated. (The undergraduate Course XII was discontinued after 1944, by which time there had been conferred a total of 264 degrees of bachelor of science in Sanitary Engineering.)

► In his 1st Annual Report as Treasurer of the Institute, *Lewis W. Tappan, Jr.*, had the unusual pleasure of noting that during the year ending September 30, 1889, current income of \$203,504.75 exceeded expense of \$203,471.56, by \$33.19.

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## Feedback

### How Will Others Reason?

FROM WILLARD ALLPHIN, '25:

THE ARTICLE "Why Civil Defense" in The Review (by Professor Eugene Wigner, June, 1964, p. 21) was very interesting, but there is one thing that bothers me. In arguing that extensive civil defense preparations would not make the Russians think we were more likely to strike the first blow, he assumes that the Russians will reason as we do.

This point seems to be open to some doubt. For example, there was an article in *Physics* several months ago which reported on one of the Pugwash conferences. The author said that it seemed impossible to convince the Russians that the President of the United States can't do anything he wants to politically. As soon as the American delegates tried to explain that the President wouldn't be able to do this or that without the consent of Congress, the Russian delegates would assume that the Americans were just lying or evading the issue.

This view, which seems plausible enough once it has been stated, not only casts some doubt on the reasoning in the article, but may explain, in part, some of the current and past misunderstandings between the two countries.

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*NEXT MONTH: How the earth can be further explored now will be outlined in The Review by Professor William von Arx, '55, in an article entitled "Given: The Earth."*

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**Trend of Affairs**

(Continued from page 34)

**The New York Center's Plans**

IN ITS second year the M.I.T. Alumni Center of New York plans four kinds of programs: General meetings, industry luncheons, departmental briefings on progress and problems at M.I.T., and continuing seminars that constitute an experiment in continuing education. All told, more than 50 individual sessions will be available to the more than 1700 Alumni expected to enroll.

Two general meetings will be devoted to the students' view of M.I.T. today: one, in December, will be given over to student life; and the second, in January, to women at M.I.T.

Industry luncheons, five in all, will begin with a discussion of research and development in the petroleum industry, chaired by Dayton H. Clewell, '33, Senior Vice-president, Research and Engineering, Socony Mobil. Luncheons devoted to architecture and construction, electronics, chemicals, and the investment field will follow.

Departmental briefings will follow the pattern pioneered last year by Professor Charles L. Miller, '51, of the Department of Civil Engineering, who will be back on March 8. Professor H. Guyford Stever will report to mechanical engineers on January 18, and Professor Edwin R. Gilliland, '33, to chemical engineers on November 30. The Electrical Engineering Department, under Professor Peter Elias, '44, will devote an evening on November 9 to "New Developments in Semiconductor Electronics," and one on December 7 to "Developments in Electromechanics," the new approach to power generation.

Unlike all of the preceding meetings, each of which is complete in itself, the seminars will form a series of short courses entitled: "Management Services," "Computers for the Uninitiated," "Computers for the Initiated," and "Long Range Corporate Planning." Finally, a seminar on "Science and Society" will discuss new directions for technical men and their organizations in the light of anticipated reductions in defense expenditures.

Information about any of these meetings may be had by writing to James N. Phinney, Executive Secretary, M.I.T., 345 East 47th Street, New York, 10017.

Professor Ithiel De Sola Pool spoke at a luncheon October 14 on "The Predictability of Politics."

(Continued on page 58)

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## Trend of Affairs

(Continued from page 56)

### For Students of Cities

THE TRUSTEES of the Richard King Mellon Charitable Trusts granted \$100,000 to each of 10 universities, including M.I.T. and Harvard, this year to establish fellowships in city planning and urban renewal.

"Many business organizations offer graduate fellowships in the areas of their interest," the trustees explained, "but there are relatively few sources of funds for scholarships and teaching posts in urban planning. . . . Much more assistance is needed for graduate education in urban professional fields. . . .

"It is estimated, for example, that in the one field of city planning fewer than 250 men and women are graduated annually, and that these are fewer than one-half the number of top-flight openings. In urban renewal education the number of graduates is but a trickle in relation to the annual requirements."

Each of the 10 schools receiving grants will get \$20,000 annually for five years, half of which is to be used as fellowship aid and the other half allocated for faculty salaries to support the programs.

Richard King Mellon, donor of the Charitable Trusts, is governor and president of T. Mellon & Sons, a Pittsburgh management firm, and has been active in Pittsburgh's postwar urban renewal and redevelopment program.

(Continued on page 62)

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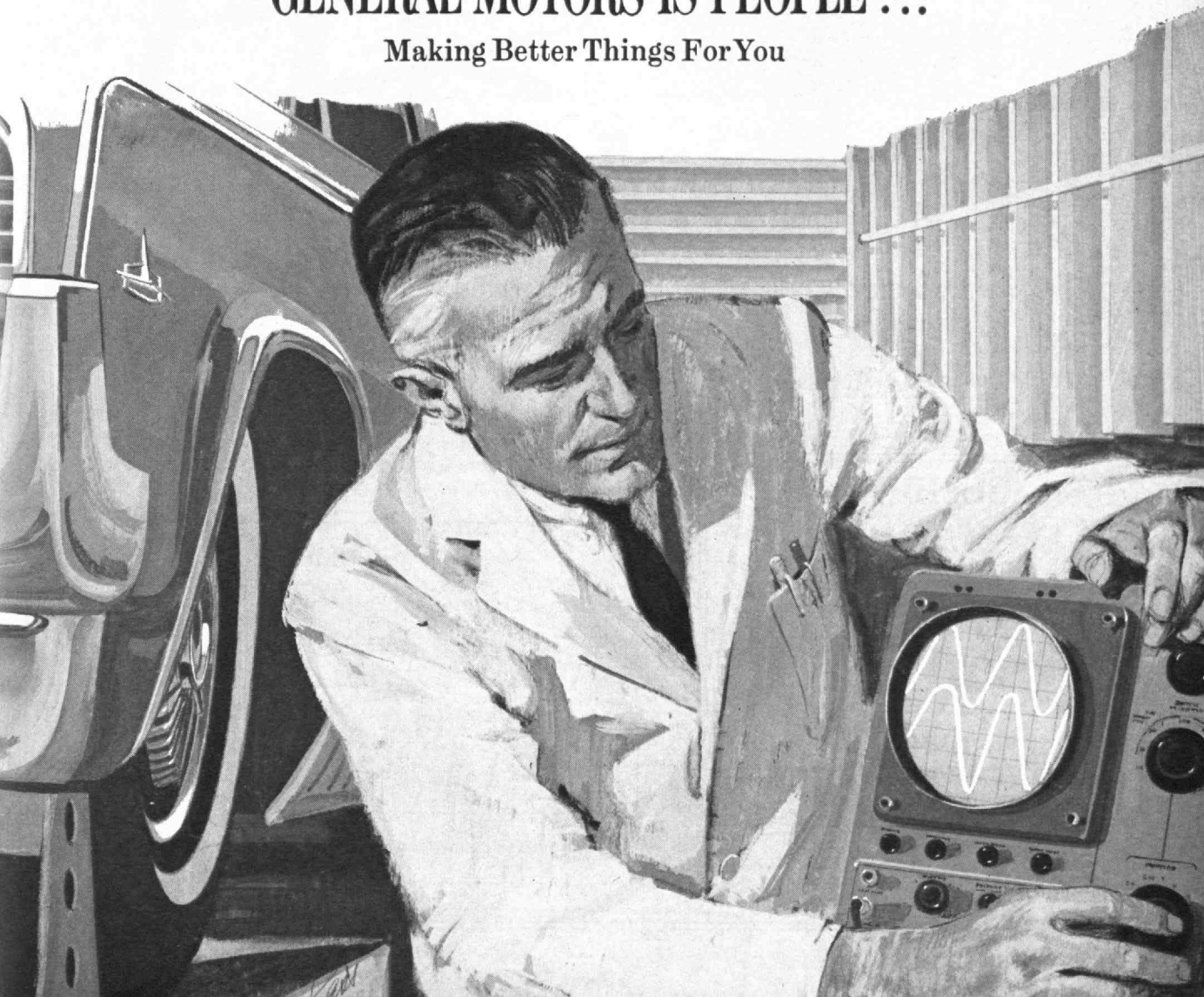
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When Christopher Rand recently returned to Cambridge, Massachusetts, for his first prolonged visit in a decade and a half he found the whole Boston area had undergone startling changes; there had been a renaissance, but one with a different kind of patron. This book is his account—at times amusing, at others disturbing—of what he saw and heard.

At these institutions Mr. Rand takes the reader on a tour of offices and laboratories. He shows how computers are used in all fields from physical science to the humanities; how far-flung global projects regularly take faculty members all over the world; how regional study "centers" are the range; how city and university life has changed; and, most of all, what happens when institutions of higher learning become deeply involved in government policy.

While this post-war trend is perhaps most noticeable at such places as Harvard and M.I.T., Mr. Rand makes the point that scientists and scholars, wherever they are, are the new elite. "We can't defend our country without them," he acknowledges, "we can't run our economy without them, we can't even attempt a foreign policy without them. Next to tech-

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nological force, technological aid is our main binder for the Free World now, and it can't conceivably be applied without technologists." In short, this book is really an exploration of a problem that concerns all Americans.

Christopher Rand, a former San Francisco newspaper reporter, is a staff reporter for *The New Yorker*.

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## Trend of Affairs

(Continued from page 58)

### In The Review Office

WILLIAM T. STRUBLE became managing editor of Technology Review on September 1. Ellison W. Smith, formerly assistant to the Dean of Engineering at Purdue University, has succeeded him as editor of M.I.T. *Reports on Research*, a monthly bulletin on new developments in science.

Mr. Struble came to M.I.T. in 1959 as assistant director of public relations, and appeared many times on the WGBH *Science Reporter* programs. He was graduated from Hobart College and also studied at the Sorbonne, at Yale University, at Harpur College, and Middlebury College. During World War II he served in Europe with a signal intelligence group and after the war taught foreign languages at Hobart. He was in the first group of six newspapermen to study for a year at Columbia University in a program for science writers sponsored by the Sloan and Rockefeller Foundations. A native of Binghamton, N.Y., he formerly worked on the Binghamton *Sun*, the *Daily Bulletin* in Endicott, N.Y., and the Rochester (N.Y.) *Times-Union*.

Mr. Smith attended the Loomis School and Princeton, and during World War II studied at Rensselaer Polytechnic Institute. He was graduated from the University of Virginia. He worked on the Suffolk (Va.) *News-Herald*, the Birmingham (Ala.) *News*, the New York *Herald Tribune*, and the Denver *Post* before going to Purdue. He was formerly an editor with International Business Machines Corporation, and has done extensive free lance writing about science.

### Upcoming Alumni Gatherings

M.I.T. club meetings this and next month will include the following:

*Boston*, November 16, with President Julius A. Stratton, '23, speaking; and December 10, with Richard H. Bolt speaking. Bruce B. Bredehoft, '56, of Loomis, Sayles & Co., is secretary.

*Los Angeles*, November 17. Arthur Schwartz, '47, of 144 S. Camden Dr., Beverly Hills, is secretary.

*San Diego*, November 18. Richard I. Singer, '53, of 3003 Fourth Ave., is secretary.

*Rochester*, November 21, with James R. Killian, Jr., '26, speaking; and December 29, with Professor Ross H. Smith, speaking. Gail E. Millard, '58, of 104 Cliffordale Park is secretary.

More information can be obtained by consulting the club secretaries.

### Upcoming in The Review

ESSAYS based on M.I.T. Alumni Seminar lectures will continue to be featured in The Review. Yet to come are:

**Man as a Living Organism**, by Professor Vernon M. Ingram.

**Our Understanding of Perception**, by Professor Richard M. Held.

**Some Rules of Language**, by Professor Morris Halle.

In December, too, The Review will report fully in words and pictures on the new Center for Earth Sciences; the dedication of the Cecil and Ida Green Building, which is the newest, highest structure on the campus; and an international conference at the Institute of oceanographers, meteorologists, and geologists on the status of their sciences.

(Concluded on page 64)

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## Trend of Affairs

(Concluded from page 62)

### The Antiquity of Science

THE SEARCH for regularity in the universe, a characteristic of modern science, began long before men learned to write, Professor Giorgio de Santillana and Hertha von Dechend of the Department of Humanities have been pointing out in an M.I.T. seminar.

The earliest science, they say, was archaic cosmology. It preceded the achievements of the Egyptians and the Greeks, and was born even earlier than any primitive flowering of civilization of which we have knowledge. Like our space scientists, men in many different parts of the world, tens of thousands of years ago, looked to the sky for explanations of the forces responsible for events in their environments.

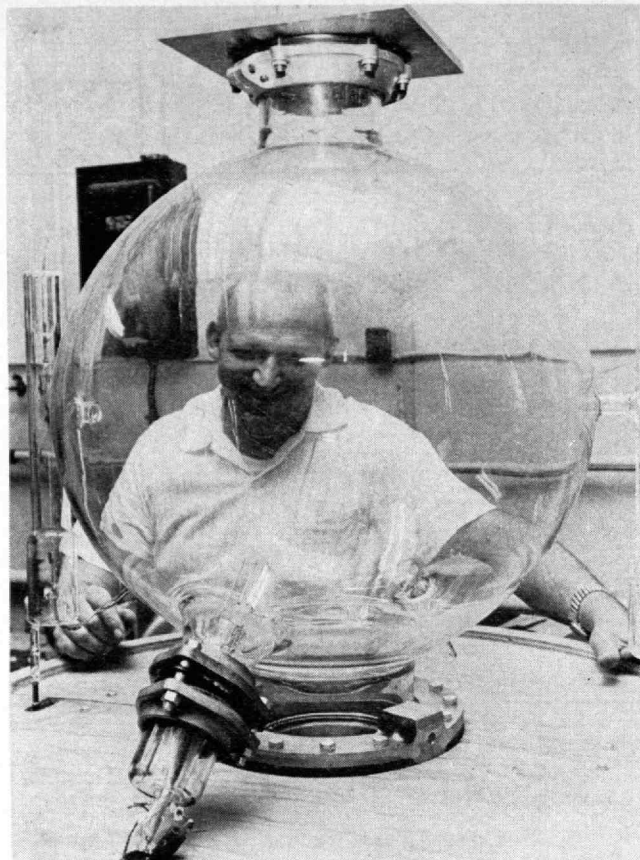
Their concepts were derived from observations of regularities, rather than catastrophic events such as sometimes have been credited. These ideas were preserved and transmitted—before the use of writing—in an indirect form of technical communication that we call myths, and that we have tended too long to regard as fantasies. Before historians appeared to record the creations of human minds, these ideas spanned the globe and were shared by some men everywhere. The great creative period seems to comprise the span between 6000 and 2000 B.C.

Psychological interpretations of documents found by the archaeologists have misled us, Professor de Santillana thinks. From a re-examination of the findings of Nineteenth Century scholars, he and Dr. von Dechend have concluded that astronomy is an even older science than we have been taught, and was effectively diffused long before letters were invented.

### The Ladies of Iran

MAHIN RAHMANI, '64, the first lady from Iran to receive an M.I.T. degree, is returning to Teheran this fall, confident that she will encounter no prejudice against women in scientific and engineering work there.

Although educational opportunities for women in Middle Eastern countries were limited until quite recently, 5.9 per cent of the engineering students in the University of Teheran last year were women. The need for engineers there is so great, Miss Rahmani told an International Conference of Women Engineers and Scientists this year in New York, that all 60 of the women among her country's 4,000 engineers are work-



*FELLOW CRAFTSMEN congratulated Wilfred Doucette (above) and Bob Di Giacomo of the M.I.T. Research Laboratory of Electronics when they adapted this 20-inch sphere for experimental physicists' use. They maintained uniform heat over its surface despite its size and thickness and successfully attached six separate pieces.*

ing in their profession. They have been helped and encouraged by the men, receive the same salaries, and enjoy the same status. "In Iran," she reported, "women scientists and engineers are currently holding important positions in educational institutions, in the Ministry of Mines and Industry, the oil industry, the Plans Organization, and the Atomic Center."

Miss Rahmani came to the U.S. with a bachelor of science degree from the University of Teheran and an advanced engineering degree from France. She received a master's degree in physics here, worked as a staff member of the M.I.T. Division of Sponsored Research, and is now going back to Teheran to teach physics.

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## Class News



'88

M.I.T.'s oldest alumnus, 99-year-old George W. Hamblet, is known as Mr. Boys' Club to thousands of youth who were privileged to come under his influence during the 37 years that he served as president of that organization. Widely known for his religious, civic and service endeavors, Mr. Hamblet has been acclaimed for his devotion to church and the youngsters he helped. He was named honorary president of the Greater Lawrence (Mass.) Boys' Club when he retired in 1961 after many years of service.

He also holds the position of moderator emeritus of Trinity Congregational Church, and nine years ago was presented the Lawrence Y.M.C.A. 'Service to Youth' plaque in recognition of his more than 70 years of affiliation and interest in the Y's projects, including Camp Lawrence on Lake Winnepesaukee, N.H. One year earlier he was one of four men honored with the Boys' Club Bronze Keystone with four silver stars. Three years before, a grateful population saw him selected as the recipient of the second annual Joshua Loth Liebman Award for accomplishing most in fostering good will and tolerance among peoples of all races and creeds.

For 20 years, Mr. Hamblet was president of the Broadway Savings Bank. He was born in Dracut, Mass., the son of Warren C. and Helen F. Clement Hamblet. He attended Lawrence Public schools and later studied mechanical engineering at M.I.T. After graduation, he was an instructor at M.I.T. for nine years. Later he purchased the Dustin Machine Company which became known as the Hamblet Machine Company and is still in the family. On January 24, 1893, he married Kate M. Clark of Lawrence, and the couple were parents to six children: Helen E., the late Marion Clark, Katherine G., Theodore C., G. Warren, Jr., M.I.T. '26, and William P. Mr. Hamblet's grandson, James E. Hamblet is an alumnus of the Class of '56. Information for this article was obtained through the courtesy of Miss Katherine G. Hamblet.

'90

Miss Lois Lilley Howe, M.I.T.'s oldest alumna, died on September 13, just 12 days before she was to celebrate her 100th birthday. Miss Howe was a pioneer woman architect and the founder of Howe, Manning and Almy, a firm of women architects who specialized in reconstruction and colonial design. The firm also drew up designs for many art centers, including the Eleanor Norcross Memorial Art Center in Fitchburg and the Art Cen-

ter in Concord. After Miss Howe finished her studies at M.I.T. in 1890, she opened her own firm in 1895. Later, in 1913, she was joined by Eleanor O'Connor Manning, '06, and in 1926 by Miss Mary Almy, '20. Miss Howe was born in Cambridge and in her youth attended the school of the Museum of Fine Arts, specializing in design. In 1931 she became the first woman to be elected a fellow of the American Institute of Architects. She was also a member of the Boston Society of Architecture and past president of the Business Women's Club of Boston.

'92

Frank Edson Perkins of Mount Vernon, N.Y., died there on June 1 of this year. He was a former deputy superintendent of school buildings for the City of New York. From 1923 to 1940 he was assistant state architect of New York. Mr. Perkins was a descendant of Governor Bradford, Elder Brewster, Mary Chilton and Peregrine White, who came to America on the first voyage of the 'Mayflower' in 1620. He was graduated in 1892 from M.I.T. and in 1898 from the Ecole des Beaux Arts Society in Paris. A member of the ASCE Beaux Arts Society for Professional Architectural Design, he was a professor at the University of Pennsylvania from 1898 to 1902. From 1904 to 1907 he served as editor of American Architect magazine, and before 1917 he practiced architecture in New York.

Born in Boston on September 9, 1870, Mr. Perkins was the son of the late Charles W. and H. Aurelia Perkins. He attended the First Baptist Church of Mount Vernon, where he had been the church clerk for more than 10 years and was a former trustee. He is survived by his daughter, Miss Margaret Perkins of Mount Vernon. Interment was at the Forest Hills Cemetery in Boston.

In 1961 Mr. Perkins wrote to President Julius A. Stratton, '23, of his desire to make a contribution to M.I.T.'s historical collection. He wrote: "When I graduated from the M.I.T., Course IV, in 1892, my father was so pleased that he gave me a watch, asking what I wished engraved on the back of its case. A good engraving of the Rogers Building was cut on the case and for many years I carried that M.I.T. next to my heart in this country, Europe and in the West Indies. I am now more than 90 years old but remember that M.I.T. used to have a collection of souvenirs at that Rogers Building. Would you like this watch to add to any such collection? Believing the M.I.T. will continue its success, I am . . ." The watch was contributed and is now a valued part of the M.I.T. Collection of the archives.

Upon receiving the news of his death,

## Happy Birthday

During October three alumni celebrated their 95th birthday anniversaries; in October and November 4, 18 and 26 alumni reach respectively, their 90th, 85th, and 80th milestones, as listed below with dates of birth.

October, 1869—JOSHUA CRANE, '92, on the 24th; SIDNEY E. HORTON, '90, on the 28th; and FRANCIS P. SEARS, '90, on the 30th.

November, 1874—JOSE H. AGUILAR, '03, on the 3rd; HENRY K. SEARS, '96, on the 8th; EUGENE W. RUTHERFORD, '98, on the 28th; and DAVID H. HAYDEN, '99, on the 29th.

October, 1879—HENRY B. BIGELOW, '00, on the 3rd; WARREN F. CURRIER, '03, on the 11th; LEONARD O. HOPKINS, '04, and FRANCIS F. LONGLEY, '05, on the 23rd; LEONARD D. CHANDLER, '01, and HENRY FITZLER, '03, on the 27th; JOHN HALL, '04, and LEWIS G. WILSON, '04, on the 28th; JAY B. SIMON, '03, on the 29th; and Mrs. MARGARET H. SHURCLIFF, '03, on the 30th.

November, 1879—HOWARD MARVIN, '07, on the 2nd; MISS EDITH A. BECKLER, '02, on the 8th; MANSON A. LYONS, '10, on the 14th; WILLIAM N. BROWN, '02, and HAROLD O. C. INGRAHAM, '06, on the 15th; HAROLD P. LARRABEE, '02, on the 16th; GEORGE P. SHINGLER, '06, on the 28th; and HARRY R. LOW, '03, on the 30th.

October, 1884—EDGAR I. WILLIAMS, '08, on the 5th; PHIL P. GREENWOOD, '07, on the 9th; HUGH B. CONOVER, '07, on the 10th; OSAR A. TASIGI, '08, on the 11th; J. SPOTTS MCDOWELL, '16, on the 12th; EDMUND F. HEARD, '08, on the 15th; HARRY E. LAKE, '11, on the 16th; BERNARD F. WHITTAKER, '06 on the 17th; EMERSON H. PACKARD, '07, on the 25th; CLIFTON N. DRAPER, '07, on the 27th; ALFRED G. LANG, '07, on the 28th; and LAWRENCE B. WEBSTER, '06, on the 29th.

November, 1884—E. HARLEY DANIELS, '06, on the 1st; SAMUEL N. MCCAIN, '09, on the 2nd; WILLIAM S. WILSON, '07, on the 8th; MAXWELL A. COE, '06, and ALEXANDER M. EMERSON, '08, on the 10th; JESSE R. CLARK, '07, and SEYMOUR J. EGAN, '07, on the 11th; CLIFFORD E. SNYDER, '10, on the 20th; FRANK W. SHARMAN, '08, on the 24th; HARRY L. BURGESS, '08, on the 25th; HAROLD C. PLUMMER, '06, on the 26th; JULIUS CREIDENBERG, '07, on the 28th; and C. ROBERT ADAMS, '05, and ROLAND H. WHITCOMB, '07, on the 30th.

President Stratton wrote to Miss Perkins: "Your father was an unusually loyal alumnus of M.I.T.—the kind of man that we are proud to call our own."

'93

Minard T. Barbour, Course II, died at Harvard, Ill., last April 19, after celebrating his 92nd birthday on December 3, 1963. He was active for many years with the Otis Elevator Company. Mr. Barbour attended the 65th Reunion of



his class at M.I.T. in 1958, and recalled undergraduate days with the late Professor Samuel C. Prescott. Survivors include his brother, William E. Barbour of Berryville, Va., and his nephew, William A. Barbour, Jr., '33, of Concord, Mass.

## '95

We were pleased to receive the six-page summer edition of "Receiver" published by The Deafness Research Foundation, New York, from which we quote as follows: "The largest grant for ear research ever made from private sources was announced recently by the Alfred P. Sloan Foundation. The grant, of more than a quarter of a million dollars, was made to The Deafness Research Foundation and is regarded as marking the beginning of a broad otologic research program. The funds are to be expended within the next two years. They are to be applied to research projects in otologic laboratories and medical schools in the United States after evaluation and recommendation by a Scientific Review Committee appointed by the Deafness Research Foundation. The chairman of this committee will be Dr. John F. Daly, Professor of Otolaryngology at New York University Medical School.

"In announcing the grant to The Deafness Research Foundation, Mr. Alfred P. Sloan, Jr. said: 'Ear research has been a neglected field.' The founder and chairman of the Sloan Foundation went on to say, 'It is our hope that projects supported under this new program will uncover promising new areas of otologic investigation and help stimulate interest among laymen and scientists commensurate with the seriousness of this widespread communication disorder.'

"Mr. Everett Case, President of the Alfred P. Sloan Foundation, declared that the Foundation has had a long-term but limited interest in otologic research. Its purpose in making the new grant is to expand its past efforts in promoting basic scientific research in this special field. 'By taking advantage of the experience and special competence of The Deafness Research Foundation,' Mr. Case declared, 'the Sloan Foundation can be assured that the funds would be applied where they will be most productive.'"—Andrew D. Fuller, Secretary, 120 Tremont Street, Boston, Mass.

## '96

At the Alumni Luncheon were Robert Davis and his son William, James Driscoll and daughter Nora, and Myron Pierce—10 per cent of the class. Only the secretary was at the dinner where '96 was the earliest class represented. . . . In the May issue of the Pennsylvania Medical Journal is a tribute to Dr. William D. Coolidge, "a graduate of M.I.T. now in his 91st year. We are also celebrating the 50th year of the so-called hot cathode tube, which resulted from the researches of Dr. Coolidge in the

metallurgy of tungsten. It would have done Oliver Wendell Holmes' physician's heart good to add the name of W. D. Coolidge to the list of non-physicians who have taught us a new method by which to come to the aid of our patients. Best of all, your tribute can be paid to a man who is with us to observe the product of his labors and to see the growth and spread of his ideas."

Occasional letters from some of our 30 classmates would be most welcome to the secretary who is trying to maintain contact with the members of '96.—James M. Driscoll, Secretary, 129 Walnut Street, Brookline, Mass.

## '97

Real news of '97 has been in unusually short supply for the past two months. I am glad to say that there are no obituaries. Our only active member, Will Binley, attended the June Reunion and evidently made enough of an impression to cause the Alumni Association to send me a special notice of his presence. I wonder if our class is representative of others in the 1890's category. . . . In my neighborhood at Hastings-on-Hudson, N.Y., dwells a remarkable Class of '91 member, Channing Brown, a retired Unitarian minister, who takes a walk of a mile or so daily and who, until this year, spent his summers in Massachusetts, perhaps to be near Cambridge for the June reunion. He called on me some weeks ago, and we settled some of the world's problems. He is much more of an optimist than I am; probably because of his calling and the fact that last month my contemplated trip to Aswan Dam had to be cancelled in favor of two weeks at Fire Island, N.Y. . . . A recent letter from Jack Isley's widow, Annie, of Milton, Mass., reports her as well and inclined to dispose of the '97 Class Records, now in Jack's files. Unless I hear from some of you with objections, I will ask to have them sent to the Alumni Association. . . . Recent figures from the Association list 21 members of our class living which, including both graduates and "drop outs," numbered over 300. Not a bad record for 67 years. Best wishes to all.—George R. Wadleigh, Acting Secretary, 70 Flower Avenue, Hastings-on-Hudson, N.Y.

## '98

We passed another milestone at our 66th Reunion last June 15, Alumni Day. The few of us who attended were Ed Chapin with his sister, Marion, and his daughter and son-in-law, Elizabeth and Professor Holden Furber; Mrs. Arthur A. Blanchard; Fred Dawes; and Fred Jones with his daughter, Audrey. Our honorary classmate, Dr. George R. Harrison, of course, was there and was seated at the head table during the luncheon. Several who have in the more recent years been with us at these Alumni Day reunions were missed this year. We have in mind Dave Fenner who passed away in Janu-

ary of this year; Professor Joe Riley; Bob Lacy, who was spending the summer at Squirrel Island, Maine; and Al Davis of Waterbury, Conn., who has given up driving his car. We have not heard of the recent whereabouts of Lyman Hewins and his seafaring family who were with us at our 65th. We surely missed Carl High, who used to be so regular in making the long cross-country bus trips to be at our reunions. A letter sent to him at his latest known address at Sarasota, Fla., has not been answered. Maybe some classmate can put us up-to-date on Carl.

On Alumni Day, in the morning, Fred Jones and his daughter were interested in the lecture on the dynamics of blood flow in the human body by Professor Merrill. The lecture was accompanied by slides showing the circulatory system in actual motion at normal and at high and low blood pressure. At the noon luncheon under the tents, President Julius Stratton, '23, gave an excellent address. We will not take time and space to dwell on his talk, but one interesting point he stressed was that, because of the great strides in the sciences and engineering and of the importance of including much new material in the curriculum of the undergraduate, it has become necessary to eliminate such subjects as higher mathematics, including calculus, which are now being taught in many college preparatory high schools. The knowledge of such higher mathematics is now required in entrance exams at M.I.T. This also applies to transit and level surveying which are taught in the lesser colleges and institutes. . . . Five of us attended the afternoon lectures in the Kresge Auditorium, presided over by Dr. George Harrison. The subjects included brain behavior, the nervous system and its control and human nutrition of food supply. As usual not many remained for the evening banquet, but Ed Chapin and Fred Dawes and, of course, Dr. Harrison represented the class at that function.

We regret to report the passing of our Course II classmate, Howard L. Bodwell, on May 12, 1964. Our letter to Mrs. Bodwell expressing the sympathy of the class was acknowledged by her. She enclosed the following obituary clipping from the Vandergrift (Pa.) News of May 13. "Howard L. Bodwell, 89, former superintendent of the Vandergrift Plant of the U.S. Steel Corporation, died yesterday at his home, 1424 Torrey Pines Road, La Jolla, Calif. Howard, who went on to become division manager of the giant corporation, was born on March 1, 1876; he started work as a draftsman for the old American Sheet and Tin Plate Company in Pittsburgh, (a U.S. Steel subsidiary at that time) on October 1, 1901. He was transferred to Bridgeport, Ohio, in 1902, to Chester, W. Va., in 1904, to Monessen, Pa., in 1905, and finally to Vandergrift on July 1, 1908. He remained at Vandergrift for 27 years, finally leaving on February 28, 1935, when he was promoted and moved to the Pittsburgh offices of the then Carnegie-Illinois Steel Corporation. He was retired on April 1, 1941. During his long tenure as head of the Vandergrift plant, he was active in many civic affairs in the community and



was widely known throughout the Kiski Valley district. Survivors include his wife, Henrietta, and two sons, Howard L., Jr., of Gary, Ind., and H. Harrison of La Jolla, Calif. Plans call for cremation to take place in California with the ashes being returned here for burial in the Vandergrift cemetery."—**Frederic A. Jones**, Secretary, 286 Chestnut Hill Avenue, Brighton, Mass. 02135; **Edward S. Chapin**, President, 271 Dartmouth Street, Boston, Mass. 02116.

## '99

**John Abbet Walls**, VI, wrote "retirement adds to the joys of old age" and mentioned his satisfaction in following advances in hydro-electric engineering and his interests in many fields of science. John's sudden death by a heart attack on May 8, 1964, in Baltimore followed a recent letter. "Such news is to be expected to sadden but is softened by the happy memories aroused by their names." John was born September 4, 1879, in Lewisburg, Pa., the son of William Cameron Walls and Anna Firch (Slifer) Walls. Pioneering in the development of water power in 1899, he served the Niagara Falls Hydraulic Power Manufacturing Company and was chief engineer in the Shawinigan Water and Power Company

and other power companies. John became a world authority on hydroelectric power, and before his retirement in 1951 he was president of the Pennsylvania Water and Power Company and the Safe Harbor Water Power Company of Baltimore. He was also director of Consolidated Gas and Electric Light and Power Company of Baltimore, Eastern Rolling Mills Company, International Power Securities Company, New York, Baltimore Transit Company and Eastern Stainless Steel Company. His memberships included the American Society of Civil Engineers, Canadian Society of Electrical Engineers, American Institute of Electrical Engineering, the Maryland Club, Baltimore Country Club, Engineer's Club of Baltimore, Maryland Historical Society, Pennsylvania Historical Society, and the Audubon Society. He was a former chairman of the Maryland Academy of Sciences, was awarded a D.S. degree by Bucknell University in 1931, and an honorary Doctor of Laws by Franklin and Marshall College in 1951. John married Eunice H. Harman on October 10, 1907; he is survived by his niece, **Mrs. Kenneth P. Billhardt** of New York.

**Norman P. Rood**, IV, died in Mexico City on May 16, 1964. Norman was born August 15, 1876, and was interested in M.I.T. affairs, but was forced to give up his career in architecture by the sudden death of his father. After selling his very

successful Dynamite Manufacturing Company to DuPont, he lived on his beautiful estate on the banks of the Brandywine River in Delaware until he moved to Mexico City in 1952 . . . **Warren A. Priest**, VII, died in Melvin Village, N.H., on May 17. He was born July 4, 1876, a son of John T. and Harriet Priest of Charlestown, Mass. Warren was advertising manager of the New England Homestead Magazine. He was married to the late Edith J. Rounds in 1907 and is survived by his cousin, Helen Priest of Charlestown.

At our 65th Reunion, the following classmates were present: Miles S. Sherrill; Hervey and Grace Skinner and their daughter Flora; Frederick W. Grover; Carroll W. Brown, his son William, '33, and his sister-in-law Miss Clara A. Haskins; Percy W. Witherell, his daughter Egilda Witherell, '44, and his son Richard, '49. At the class meeting, on the motion of **Hervey Skinner**, **Norman E. Seavey**, 20 Lucerne Circle, Orlando, Fla., was duly elected president. We enjoyed the letters of greeting from J. Walter Allen, Harold W. Beder, Philip Burgess, George P. Dike, Charles D. Drew, James C. Dryer, Charles F. Harwood, Henry F. Leavitt, James G. Leiper, Jr., Alfred W. Lombard, Etheredge Walker, Walter W. Wells, and Harry K. White. We thank them for remembering '99. . . . The Class Representative to the Alumni Coun-

## Deceased

LOIS LILLEY HOWE, '90, Sept. 13  
FRANK E. PERKINS, '92, June 1\*  
MINARD T. BARBOUR, '93, April 19\*  
RALPH C. HENRY, '96, June 27  
M. ERNEST MOORE, '96, Sept. 26, 1963  
HOWARD L. BODWELL, '98, May 12\*  
WARREN A. PRIEST, '99, May 17\*  
NORMAN P. ROOD, '99, May 16\*  
JOHN A. WALLS, '99, May 8  
LEONARD S. FLORSHEIM, '01, May 22\*  
ARTHUR G. HAYDEN, '01, March 18  
ROBERT S. EDWARDS, '02, June 5\*  
WILLIAM L. DOTEN, '04, May 9  
LOUIS A. HERMANN, '04  
MRS. KENNETH L. MARK, '04, July 30\*  
E. FARNUM ROCKWOOD, '04, July 22\*  
ARTHUR S. WEBSTER, '04  
ANDREW FISHER, '05, Sept. 3\*  
WALTER K. GILLET, '05, Feb. 3\*  
LOUIS J. KILLION, '05, March 14  
EUGEN F. KRIEGSMAN, '05, \*  
JOHN A. MEGGISON, '05, March 15  
ARTHUR M. CHENEY, '06, March 24\*  
CLARENCE E. LASHER, '06, April 3  
CHARLES J. RICH, '06, Aug. 7  
PHILIP B. SADTLER, '06, May 7  
ALBERT H. DONNEWALD, '07, July 25\*  
CHARLES A. EATON, '07, May 27\*  
HAROLD P. FARRINGTON, '07, June 7  
BURKETT S. CLAYTON, '08, April 14  
SAMUEL H. DADDOW, '08, June 17  
JOHN E. OTTERSON, '09, Aug.  
WALTER J. ROUNTREE, '09, Nov. 5, 1963  
WILLIAM F. WELLS, '09, Sept. 19, 1963\*  
HERBERT E. FOWLER, '10  
HOLMAN I. PEARL, '10, June 26\*  
CLIFFORD G. SHERMAN, '10, June 23\*  
ANTONIO C. CLAVELL, '11, Feb. 28, 1963  
CLEON R. JOHNSON, '11, May 1

WILLIAM H. AHEARN, '12, May 3\*  
M. M. CORY, '12, Sept. 26, 1963  
LINZEE S. HOOPER, '12, June 12\*  
HAROLD G. WATKINS, '12, July 8\*  
ROBERT W. WEEKS, '13, Jan. 28  
JAMES A. HADLEY, '14  
WILLIAM E. LUCAS, JR., '14  
CHARLES G. MAIER, '14, April 19  
R. S. MARTIN, '14  
FUCHENG SEETOO, '14  
CLIFFORD J. WALTON, '14, June 9  
MIN-SHOU ZHEN, '14  
RALPH E. CURTIS, '15, July 4\*  
ROBERT E. WILSON, '16, Sept. 1\*  
R. K. ROBINSON, '17, June 21\*  
ARTHUR A. CHURCH, '18, Oct. 24, 1963\*  
FRANCIS P. CORBETT, '18, Dec. 29\*  
ALAN F. HOWARD, '18, Aug. 2\*  
MEREDITH F. PARKER, '18, \*  
MRS. FRED E. OLFENE, '19, June 19  
FREDERICK H. SMYSER, '20, June 21\*  
HAROLD M. ESTABROOK, '21, Aug. 18\*  
GLENN PHELPS, '21, \*  
C. L. GIROUARD, '22, Feb., 1963\*  
JOHN W. HEMPHILL, '22, July, 1963\*  
ALFRED J. MARIA, '22, June 14\*  
EDWARD A. S. MORSE, '22, Jan. 16\*  
CHARLES J. TAYLOR, '22, 1962\*  
ERIC B. TOWNSEND, '22, June 12, 1963\*  
FRED W. HERLIHY, '23\*  
EDWARD P. ROLL, JR., '23, June 17  
ALEXANDER G. SMALL, '23, May 2  
SAMUEL B. ABBOTT, '24, Nov. 28, 1962\*  
JOEL A. DAVIS, '24, July 5\*  
JOSEPH B. GLANCY, '24, Jan., 1963  
GEORGE NEITLICH, '24, Aug. 25\*  
GEORGE P. SWIFT, '24, June 3\*  
WILLIAM W. BINFORD, '25, \*  
ROBERT R. THOMAS, '25, Dec. 24, 1962\*  
EARL S. GRUVER, '26, 1963  
GEORGE HANNAUER, JR., '26, May 1

ARTHUR A. McLACHLAN, '26, June 9  
ROBERT A. NADLER, '27, April 29\*  
DURAND CHURCH, JR., '29, Aug. 2, 1963\*  
LIVINGSTON LONGFELLOW, '29, Dec.\*  
ALBERT L. EIGENBROT, '29, Jan. 21\*  
ADAM K. STRICKER, JR., '29, Aug.\*  
RICHARD T. BARNES, JR., '30, April 27\*  
WILLIAM COFFEY, '30, May 30\*  
GILBERT L. COX, '30, May 6\*  
BIAGIO C. d'ANTONI, '30, July 26\*  
CARL J. ELLSWORTH, '30, May 18\*  
GEORGE E. CARTER, JR., '31, Dec. 4, 1962  
B. JOHN KINIRY, '31, Jan. 21, 1963\*  
MANDELL D. STOLLER, '31, Aug., 1963  
NICHOLAS D. CONSTAN, '33, March 8  
MICHAEL A. EITELMAN, '33, March, 1963  
MISS MAUDE E. GARDNER, '33, Feb., 1963  
H. TYSON LYKES, '33\*  
HENRY F. MACE, '33\*  
ALVAH RAYMOND, '33, May 2\*  
STANLEY L. HEPP, '34, Dec. 23, 1963  
CHARLES P. HALEY, '38, March 25\*  
DONALD L. HERR, '39, June 29  
PAUL L. E. ALBERTI, '40, May 18\*  
ROBERT L. ARNOLD, '40, 1963\*  
WILSON M. COMPTON, JR., '41, July 13\*  
HAL B. STETSON, '42  
JAMES P. BUCHANAN, '44, June 11  
BERNARD J. FARNSWORTH, '45, Feb. 22, 1963  
DONALD C. MORK, '48, April 24\*  
JOHN H. SAVAGE, '48, July 9\*  
KENNETH M. THOMPSON, '48, Nov., 1961\*  
ELLIOTT H. GRIFFITH, '51, April 17  
CHARLES E. PORTER, '53, Aug. 14  
ARTHUR S. TINGAS, '53, June, 1963  
ROBERT D. BROWN, '56, Sept. 16  
LUCIO PONTECORVO, '61, July 30\*

\* Further information in Class News

cil, Miles S. Sherrill, President Norman E. Seavey, Class Agent Hervey J. Skinner and Secretary Percy W. Witherell attended the Alumni Officers' Conference on September 11-12 and were thrilled with the recent accomplishments and the Institute's advance planning of academic, research and personnel policies.—Percy W. Witherell, Secretary, 1162 West Street, Wrentham, Mass. Tel. 384-3164.

# '00

The Alumni Day luncheon of last June 15 was attended by the group that we expect to find on such occasions. This included Stanley Fitch, Minnie Lawley, Charles and Alice Newhall, Charles and Elsie Smith, Percy Ziegler and the Secretary. This luncheon is the only form of class reunion that we have had recently. Next June will see our 65th anniversary. Your secretary wonders if any other type of reunion would entice other members of the class to join us. Any suggestions along this line would be greatly appreciated. . . . At this luncheon we were happily surprised to be joined by William J. Brickley. He has never met with us before and has been classified as an affiliate of the Class of '01. However, he was with us during all four of our undergraduate years and has now requested that his affiliation be transferred to the Class of '00. We gladly welcome him. For many years he was county medical examiner of Suffolk County. He is now retired and lives in Boston. During World War I he was director of Base Hospital Unit No. 22 with the rank of lieutenant commander of the U.S. Naval Reserve Force.

Last March or April the M.I.T. chapter of the Phi Gamma Delta fraternity held its 75th anniversary. Of the five '00 members of this fraternity, Percy Ziegler is the only present survivor. Percy evidently attended this anniversary with his usual enthusiasm and judging by the grin on his face in a picture showing him cutting the anniversary cake, with much pleasure.—Elbert G. Allen, Secretary, 11 Richfield Road, West Newton, Mass.

# '01

Since writing the July notes I have received word of the death of Leonard S. Florsheim in Chicago on May 22, 1964. I have no detailed news. . . . I have a copy of the Journal of the Patent Office Society sent me by John Boyle. In it he has a long article about "The Long Delay in Granting Patents." He has contributed some 40 articles to the Journal and was a member of the original board of editors of Volume I. He was an examiner from 1903-1919; patent attorney from 1919-1942, in private practice; patent counsel to Alien Property Custodian, Reconstruction Finance Corporation, War Assets Administration, General Services Administration, 1942-1953; patent consultant, Department of Justice, 1953-1959. . . . I have run out of class news, so if there is no 1901 news in the next issue it is be-

cause I have nothing left to write.—Theodore H. Taft, Secretary, Box 124, Jaffrey, N.H.

# '02

Our class had a very small representation on Alumni Day, namely Arthur Collier and Mrs. Collier, Lewis Moore and Mrs. Moore and myself. We spent that part of the morning before luncheon chatting in the shade of a tree in the Great Court. After luncheon all but myself joined in the scheduled activities of the day and evening while I visited the new Boston on my way home to Salem. Very little class news has filtered through. . . . Ambrose Bourneuf called in this summer, and we had a very pleasant afternoon. . . . Dan Patch writes that his garden has furnished his freezer with a goodly supply of vegetables for the winter. . . . Lewis Moore and Mrs. Moore spent the summer in the White Mountains of New Hampshire.

Death has taken another member of our class. Robert S. Edwards, Course V, died in Milton, Mass., on June 5, 1964. Edwards was graduated from Bowdoin before entering M.I.T. and returned to Maine for his first job as consulting chemist for the Rockland-Rockport Lime Company, where he remained for three years. He was state assayer for Maine from 1904 to 1909, but was located in Boston in 1905 as analytical and consulting chemist. He and Bert Sherman were in partnership in 1907-1908, offering their services to those interested in the manufacture and testing of cement and lime. This partnership was dissolved in October, 1908, and Edwards then went into business designing and erecting lime manufacturing plants in Texas and California. In February, 1910, he was called to Oregon to take charge of the work of selecting, inspecting, and testing concrete materials to be used in the hydroelectric development of the Portland Railway, Light and Power Company, a reinforced dam built in 1910-1911. Edwards remained in Oregon for several years carrying on in his chosen line of consulting and chemical engineering in the Northwest area. He lived in Oregon for several years and later in Berkeley, Calif., but returned to Brookline during World War I. He moved to Milton in 1927 continuing his practice as a consulting chemical engineer in the Boston area. In 1913 he married Terese Pastene (Wellesley, '07) who survives him as do three daughters and a son.—Burton G. Philbrick, Secretary, 18 Ocean Avenue, Salem, Mass.

# '03

Well, classmates, the summer period of relaxation for those of us fortunate enough to still be active is over. Our members, once so closely concentrated in the area around Rogers and Walker, are now residing, at the close of their busy careers, in all corners of the country. Yet,

your secretary learns that each one is happy with his family and in the presence of grandchildren to grace the waning years. It is appropriate after the long strain that characterizes an M.I.T. career, to note the endless enthusiasm of our classmates, still evident in their correspondence. Ike Atwood, II, our Alumni Council representative, reports that he and Mrs. Atwood enjoyed revisiting the Orient this summer; we eagerly await a report of their experiences. . . . Gus Eustis, II, our active treasurer, spent most of the summer at his cottage on the Maine Coast with his daughter and her family. . . . Harold Osborn, VI, wrote me on July 8 a most touching letter regretting his absence from our June reunion because of a severe heart attack that required hospitalization. His devoted wife, after 57 years of companionship, passed away last August. Still hopeful, he added his desire "to join all the boys" in our 65th Reunion. Alas! Today I received the news of his death from Tyrrell Cheney, II, through the following press clipping: "Harold Osborn of Grumman Hill Road died suddenly on Friday, the 28th, at the age of 83. He was pronounced dead on arrival at the Norwalk Hospital after he had been stricken ill while shopping in a store on Route 7 in Norwalk. A resident of Wilton for 17 years, Mr. Osborn was the husband of the late Mrs. Madeline Osborn. He was an electrical engineer, a graduate of the Massachusetts Institute of Technology and employed by the Lockwood Green Engineering Company for several years and later as a consultant. He is survived by his son, Harold B. Osborn of New Haven, a daughter, Miss Julia A. Osborn of Warner, Vt., one grandson and several cousins. Services took place on Monday, August 31 at the Bouton Funeral Home, Georgetown with Reverend Ralph H. Sequine of Norwalk Community Baptist Church officiating. Interment was in Hillside Cemetery."

Tyrrell states later in his letter that he could not attend Harold's funeral as Mrs. Cheney has been very much of an invalid for several months, requiring treatment at New Haven Hospital. Last May, they went to Williamsburg, Va., to recoup but her heart ailment continues and confines them to domestic duties. He and Mrs. Cheney did enjoy a family reunion party on June 26 on the occasion of Tyrrell's 84th birthday. He is still hale and hearty enough for occasional games of golf. . . . Stanley A. Foster, X, joined our group at Commencement last June and wants it known he abhors the modern practice of cutting grass with a motor; the old hand-powered clippers retain his youthful vigor as he tackles his large lawn. . . . I enjoyed a pleasant visit at the home of Roy Thwing, II, recently. He and Mrs. Thwing attended our memorable 60th Reunion and he treasures our supper picture of the event, as the others present do. . . . Another reference to our 60th brings forth our chairman, Professor Andrey A. Potter, VI, Dean Emeritus of Engineering, Purdue University, who recently finished a 3,060-mile trip with Mrs. Potter by automobile, to Alabama, Mississippi, Louisiana and Texas. They visited son James, a professor of physics at Texas A and M



for the past 19 years. We congratulate the Potter family, with daughter Helen, also a professor at Loyola University, for their enviable scholarship record.

**Arthur Allen, II**, wishes to be remembered to his course classmates especially and was disappointed that he could not attend our 60th because of cataracts. Otherwise, he is in pretty good physical condition. . . . Our Happy Birthday greetings go to **William A. Howell, VI**, who celebrated his 85th milestone on August 12; **Paul R. Parker, XIII**, on September 13, and **George B. Bradshaw, X**, on September 30.—**John J. A. Nolan**, Secretary, 13 Linden Avenue, Somerville, Mass.; **Augustus H. Eustis**, Treasurer, 131 State Street, Boston, Mass.

## '04

It is with mixed emotion that we look back on our 60th Reunion. It was pleasant to meet old friends and recall numerous interesting items in our class history, but the vacant chairs could not be overlooked. At one time we had 36 potential attendants on our list including wives and sons, but for various reasons the maximum attendance turned in was 21, as follows: **William H. G.** and **Mrs. Bouscaren**, **Carle R.** and **Mrs. Hayward**, **Amasa M.** and **Mrs. Holcombe**, **Robert M.** and **Mrs. Phinney**, **Arthur P.** Porter and daughter, **Frank Davis** and son, **Fred Farrell** and son, **Melvin Schwartz**, **Harry S. Kendall**, **Daniel F. Comstock**, **Eugene H. Russell, Jr.**, **Arthur D. Smith**, **Harry T. Rollins**. President and **Mrs. Stratton** graciously attended our opening cocktail party in the penthouse of the **McCormick** dormitory. There was great regret that our classmate and generous donor of this beautiful building was not able to be present. Your secretary received the following letter from **Mrs. Katherine McCormick**, who was in Switzerland at the time of our reunion: "Dear Professor Hayward: I have just received your note of June 19, forwarded from Boston. I appreciate so much your very kind words about my dormitory as I know you would understand how much I cared to give it to Tech. It was very unfortunate that certain business engagements abroad caused me to miss the 1904 reunion. With thanks for your note, Sincerely yours, K.D. McCormick."

Twenty-one attended our class dinner on Sunday noon and were entertained by humorous stories told by **Dan Comstock**. The regular program for Alumni Day went off on schedule. . . . Two more classmates have joined the majority of deceased persons. One of these is **Mrs. Kenneth L. Mark**, one of our few co-eds, who died July 30. The second was **Tammy (E. Farnum) Rockwood** who has been a regular attendant at most of our class affairs. Rockwood had a distinguished career and was well spoken of in the papers. We shall miss him.—**Carle R. Hayward**, Secretary, Room 35-304, M.I.T., Cambridge, Mass.; **Eugene H. Russell, Jr.**, Treasurer, 82 Devonshire Street, Boston, Mass.

## '05

There isn't a great deal to tell in regard to the '05 Reunion on Alumni Day. As usual we had the largest turnout of any class anywhere near our age group. **Carleton Atwood** and his bride of last fall were present for their induction into class activities. Carl boasted that while they had been married less than a year they had nine grandchildren. **Andy** and **Frances Fisher** were absent, for the first time in many years, because of Andy's heart problem, but they sent their daughter **Anne**, with husband **Byron Henke**, of Washington, D.C., whose presence was much enjoyed. **Bert Files** escorted his daughter **Cheri Richards**, who graciously became an honorary member of '05. Present also were **Court** and **Elizabeth Babcock**, **Len** and **Beatrice Cronkhite**, **Myron** and **Rose Helpern**, **Art Balkam**, **Henry Buff**, **Harry Charlesworth**, **Gil Joslin**, **Hub Kenway**, **Doc Lewis**, **Bob McLean** and **Izzy Nye**. All had properly registered, and some day we hope that the gentlemen in charge of seating arrangements will provide amply for those registering. Ideas for our 60th Reunion were passed around the table, but no concrete plan developed.

During the summer, several classmates visited '05 headquarters in Sandwich. **A. Warren Wells, I**, and wife of **Orange City, Fla.**, paid us a little visit. I had not seen **Warren** for many years, perhaps 59, but we began to chatter where we left off in 1905. **Harry Charlesworth** dropped in for a brief call, but had to get back to his farm in time to tend to the chores. **Hub** and **Helen Kenway** were here for a call in August, and we returned the call at their farm in West Franklin, N.H., quite recently. . . . With no particular object I was looking over the '05 notes in the November, 1958, Review and noticed the article on **Willard Simpson** in which he extolled the fascinations of his summer home in Boerne, Texas. Strange, because six years later **Ruth** and I were to experience and enjoy that beautiful summer home for two spring months. From recent correspondence, I have learned that **Willard** has had two very serious accidents. Without warning, he had a hemorrhage in his eye and has temporarily lost the vision in that eye. A bit later, while riding in an auto belonging to a friendly contractor, there was a collision and as a result **Willard** was hospitalized with serious neck pains. At last report he had been in the hospital for three weeks but was able to handle office and personal correspondence through a recorder. I am hoping daily to hear that he has been given a clean bill of health.

Through a clipping from the June issue of the *Journal of Metals*, I learn that **Richard W. Senger, III**, was honored with the A.I.M.E. Legion of Honor medal for more than 50 years of service. He was director of technical employment and training for American Smelting and Refining Company in Salt Lake City before retiring in 1947. . . . A letter from **Sam Seaver, XIII**, from Markham, Ontario, states that he and his wife were planning

extensive travels, perhaps even to our 60th Reunion. . . . Listen, you hardy octogenarians, a letter from **Errett M. Graham**, Shaw Island, Wash., states that he has taken on the job of surveying and dividing up into lots a 216-acre, rough and rocky island named "Obstruction," one of the San Juan group. He canoes from Shaw Island to the mainland, then flies to **Blakely**, another island, then canoes between **Blakely** and **Obstruction**. This sounds very formidable to me but through **Joe Daniels, I**, have received a map, which shows that this is not out on the Pacific, but in the Strait of Georgia between **Bellingham**, Wash., and **Vancouver Island**. I still say it is formidable. In **Joe Daniels'** letter he says that this is one of their treasured scenic spots, now undergoing a real estate boom. The San Juan Islands constitute an archipelago, where, "You can buy either a house lot or an island." In his letter he referred to a pending birthday and anniversary. I had already anticipated these and had sent **Joe** a welcome to the '05 Octogenarian Club (August 8) and congratulations to **Joe** and **Gladys** on their Golden Wedding Anniversary (July 31). **Joe** also wrote: "We have a summer camp on **Whidby Island** in **Puget Sound**, 300 miles from here, reached by highway and ferry that serves as a break from city routine—clams, crabs, fish, berries, fresh eggs and milk, vegetables, and beautiful scenery. I depend on **Gladys** to drive me to local engagements, and I have an emergency walking stick if I need it. Sorry, but must regretfully say I cannot go (to the 60th Reunion)."

**Bob Beard** writes, "My book, 'Patterns in Space,' is now being distributed by the *Fibonacci Quarterly*, St. Mary's College. The *Fibonacci* Association emblem is a star of 21 stars of my design. I am starting a column in the *Fibonacci's Quarterly* under the caption of the 'Fibonacci Drawing Board.' This is the day (July 15) that the Republican Convention will go all out for **Goldwater**. Somebody has to stop these dreamy splurgers from spending us down the road to ruin." . . . **Bob Young** wrote: "I would like to say that I will be there in '65, but I have asthma and emphysema and cannot promise. However, I have just learned of a new treatment, which worked a miracle on a neighbor and after a winter in California I might be all right." . . . Having heard that all was not well with **Edward C. Smith, V**, I wrote **Herman Elsele, XIII**. He accepted the assignment and wrote: "I frequently contacted **Smith** when I was at M.I.T., but have not been in touch with him since graduation. I called the **Wright Nursing Center** (Cleveland) and they tell me he is suffering from acute arthritis, but that he is able to get around with a walker. I am also told mentally he is generally normal. I will follow up." **Herman** added nothing of a personal nature, but we can assume he is in good (or reasonably good) health.

**Myron Helpern, V**, in sending in a contribution to the class treasury said: "In the past year we (Touraine Stores) have been very busy opening and revamping stores. Therefore, the only thing that is bothering me now is all the preparations



for a trip which Mrs. Helpert and I are planning. We are starting on July 1, and will fly to Lisbon, and from there and the beach of Estoril, we will do some traveling in Portugal and Spain. After a couple of weeks, we shall fly up to the Scandinavian countries, spending some time in Copenhagen and Norway, where we have a granddaughter who is there for the summer studying, and then we will take the fjord trip. We expect to return sometime in the middle of August." . . .

**Roy Allen**, I, writes, "We still like Orange-wood (a community residence for 200 retired persons—Editor's note) nice people, friendly, well-educated and ample interests. Grace and I and **Hal Richards**, I, attend a Spanish class twice a week, and starting this week college professors are giving lectures on current events and Arizona history. We have been entertaining the thought of driving up into British Columbia—about a 5,000-mile trip, but sometimes the flesh is weak."

One of the most difficult things for me to do is to report the death of **Andy Fisher**, who passed away on September 3 after a series of heart attacks covering a period of several months. It would be easier for me to write the story, "My Most Unforgettable Character" about Andy (and I still may) than to try to write a proper obituary in the space allowable here. Andy was an "anti," but I came to know long ago that he was just the opposite of an obstructionist. It was rather a pose intended to bring out two sides of a question—and it did. I remember the time he fought the "powers above" at the Institute to get them to lower the flag in the Great Court in memory of **Ike Litchfield**, whom he claimed was the greatest friend of M.I.T. and as much entitled to that sign of respect as the President. The flag was lowered. I remember that he battled the Admissions Office for the enrollment of fellows of different race origins and color. This does not mean the Admissions Office was opposed to an applicant on account of race or color but that some were not getting their feet inside the right door. Most of them were admitted and Andy was proud of their records. Andy came into my office quite often to tell me how to run class affairs and to tell me what kind of a secretary I turned out to be. On his leaving several of my secretaries have said, "Mr. G., you shouldn't even allow that man into your office." But I loved it for I realized it was his way of showing respect, and perhaps affection. Enough of this until I write my story. Andy left a wonderful family. I have mentioned them often, because Andy with great pride told me of their progress and achievement. His wife, Frances, was and is a grand person. The two daughters, Anne Henke, and Edith Hunter, are wonderful persons. Son, Andrew, 3d, is "tops" with International Harvester in Albany, N.Y. The nine grandchildren—well, I have written about them frequently, have met and chatted with them all and admire their achievements.

There are other deaths to chronicle. **Walter K. Gillett**, V, died in Altadena, Calif., on February 3, 1964. I have re-

ceived no obituary to fill in the details, but a letter from his wife tells of the dedication of a memorial window given by friends, in the Saint Marks Episcopal Church in Altadena, where he "worked in the vineyard" for many years. This I quote: "Walter Gillett spent his life in the field of medical chemistry. A favorite niece is an Episcopal nun, serving as a physician in the Order of St. Margaret."

. . . **Dez C. Schonthal**, II, died in Huntington, W.Va., on February 17, 1963. Dez was chairman of the board of directors of the former West Virginia Steel and Manufacturing Company from 1949 until his retirement in 1956 and prior to that was vice-president. The company is now the West Virginia Works of the Connors Steel Division of the H. K. Porter Company. A Huntington resident since 1903, he was born in Hungary, a son of the late Joseph and Hermine Greene Schonthal. He attended the M.I.T. and was a graduate of Ohio State University. A member and former president of Ohev Shalom Congregation, he was a member of the Guyan Golf and Country Club, B'nai B'rith Lodge, the Guyandotte Club, Huntington Lodge 313, BPO Elks, the Masonic Lodge, and had been a member of the United Commercial Travelers for more than 50 years. Active in civic work, he was a member of the lay board of St. Mary's Hospital.

**Eugen F. Kriegsman**, I, died in Boise, Idaho, on March 21, 1964. Through Curtis B. Brown, '31, I obtained a clipping from the Idaho Statesman (Boise) and quote in part: "Eugen F. Kriegsman, 81, of 102 West Jefferson Street, a retired engineer, died at a local hospital Saturday morning after a long illness. He was born December 8, 1882, at Boston, Mass. Mr. Kriegsman was a graduate of M.I.T. and lived in Washington, D.C., where he was employed with the Department of Public Roads. Upon retiring in 1955, he moved to Boise and taught at Boise Junior College for one year. He was a member of St. John's Cathedral and the American Society of Engineers and its Idaho affiliate. Survivors are his wife, Caroline, and one stepson, Seymour Simonsen, both of Boise; three stepdaughters, Mrs. Raye Rees of Salt Lake City, Mrs. Ellen Morrissey of Van Nuys, Calif.; and Mrs. Jeane Stroud of Denbigh, Va., and two sisters, Miss Gretchen Kriegsman of Providence, R.I., and Mrs. Charlotte Beugler of Los Angeles, Calif." Mr. Brown kindly telephoned Mrs. Kriegsman and learned that Gene had been in a nursing home a long time prior to passing away. . . . Plans for the 60th Reunion are still being considered, and a committee will be announced soon.—**Fred W. Goldthwait**, Secretary, Box 32, Center Sandwich, N.H.; **Gilbert S. Tower**, Assistant Secretary, 35 North Main Street, Cohasset, Mass.

'06

As it seems to be a tradition now, we will start these notes with a report on Alumni Day, June 15. We had a larger than normal group at the luncheon, four

couples, six stags, two grandsons, and a guest, a total of 17, including Betty and Stew Coey, Bertha and Sherm Chase, Ruth and Chester Hoefer, Marion and Ned Rowe, Abbott, Davol, Gibbons, Kasson, Mears, and Wick. The Coeys had a grandson along and so did Mike Gibbons, also a guest. The prize for distance went to **Henry Mears** from Tigard, Ore., although he had come a roundabout way, via Greece. Henry had phoned me from Cambridge, where he was visiting relatives I believe, and said he would like to attend graduation exercises. I suggested he contact Don Severance; he did, and Don got him in. A few of us stayed for the evening banquet and some for the Pops concert. . . . **George Guernsey** phoned me after he had returned from Florida and said he had sold his house on Upland Road in Wellesley, but he did not move very far, just across the street to No. 14. Along in August I met Herb Cleverdon, '10, a fellow townsman, and during our chat he said he had recently visited **Sam Ware**, XIII, who seemed in good health and spirits. That reminds me of a visit Marion and I made earlier that month in Manomet (on the shore below Plymouth) near where the Ware family have for years had a summer place. We didn't see Sam but did have an enjoyable afternoon 'coffee' with Helen and **Will Farley**, I. Some of you New Englanders may recall that Reverend John Eliot was an Apostle to the Indians and had translated and published an Indian Bible. In Mashpee on Cape Cod there survives an old Indian church and in July, at that church, a service was held commemorating the 300th anniversary of that Indian Bible. Along with a group of Wompanoag Indians in full regalia attending the service was a direct descendant of Reverend John Eliot, Helen Jarvis Farley. A very special Pow-Wow Helen!

While we were visiting in New Rochelle in June, Marion and I spent a day at the World's Fair, that is, part of a day because a deluge in the afternoon put a damper on sightseeing. It reminded us of the same experience at the same site exactly 25 years before. Another visitor to the Fair likes water and wants plenty of it. That could be **Bob Rose**, XIII, who with Anne spent a month during the summer abroad his 'White Heron' docked at the Marina near the Fair. Bob had engaged his berth a year ahead and they have enjoyed, as guests on board, their grandchildren and many friends. Doubtless many of you have visited the Fair too, but a card from Bob was the only one we received. Why not send me one soon? . . . I hear from the West Coast at intervals, the most recent being a note from **Fay Libbey**, III. He peruses *The Review*, is "still in circulation but on a rather limited basis" (like most of those in our age bracket) and had "just returned from a week's vacation on the Coast with my daughter, son-in-law, and three grandchildren. It was all very enjoyable but my activities did not include water sports which I used to enjoy so much."

Somewhere in this issue you will find a report about the Fifth Alumni Officers' Conference, which was held on Campus

in September. **Stew Coey** and I attended, he being an Educational Counselor these many years. We roomed together in Baker House and were together at most sessions, although Stew missed the Saturday program as he had to leave early to reach Boothbay Harbor in time for the last boat out to Squirrel Island. Stew says that after selling their place in Glen Ridge they expect to move into an apartment in the new home of their daughter, son-in-law and grandchildren in Wilmington, Vt. The Friday sessions were held in Kresge, with a buffet supper and evening session in Walker, when 11 Beaver Awards were made. The lecture-demonstrations Saturday morning were the first use of the lecture hall in the new Green Building which was dedicated this fall. Before leaving the new earth sciences building Horace Ford took me up to the top (25th?) floor where I had a fine view of Boston Harbor out to Hull and beyond. The conference closed with a lunch at the Faculty Club and after the expressions of thanks to the more than 400 men and women attending, by Sam Groves, '34, Conference Chairman, Dr. Stratton and Dr. Killian, I felt like rising to speak for the 400 in thanking the seven men on the Conference Committee and the many others who had a part in the program and sessions, as well as the Institute for providing "room and meals" for us. Like everything else about M.I.T., these conferences get better and better!

Only one address change: —**Charles L. Anson**, XIII, to 407 North President Street, Wheaton, Ill. . . . Sadly, we have four deaths to report; **Arthur M. Cheney**, II, died on March 24; **Clarence E. Lasher**, VI, on April 3; **Philip B. Sadtler**, X, on May 27; and **Charles J. Rich**, II, on August 7. Careers will be included in future notes.—**Edward B. Rowe**, Secretary-Treasurer, 11 Cushing Road, Wellesley Hills, Mass. 02181

## '07

Alumni Day, June 15, 1964, was ideal as far as weather was concerned for out-of-door festivities. However, it apparently was not a propitious day for '07 members to get away from their retirement activities or business duties. President **Robbins** and Mrs. **Robbins**, **Louis A. Freedman**, **Phil Walker** and his wife were all that signed up to attend. However, at the luncheon table we were joined by **Henry Martin** and two friends. . . . Each year your secretary realizes, more and more, his inability to keep up with the modern trends in education. He had no idea that a civil engineer would discourse on a respirator for infants, as did Dr. Philip A. Drinker, '51, an assistant professor in Course I. . . . The noon luncheon was most enjoyable, and the reports on class gifts and the 1964 Alumni Fund Drive very enlightening. The amount of the class gifts certainly indicates that Tech men earn much more today than they did when our class graduated in 1907. Reports from Dr. Killian and President Stratton on the financial needs and policies of M.I.T. were listened to and greeted as al-

ways with much enthusiasm. The afternoon was spent in Kresge Auditorium with a discussion on "Servomechanisms in Living Systems." The social hour was held in the Armory, and the Alumni Banquet, in Rockwell Cage. Frank Davis, '04, looked me up to inquire for **Carl Bragdon**. The evening, with Arthur Fiedler and the Boston Pops Orchestra, was a fitting close to a day of fellowship with friends and classmates of former years.

**James M. Barker** has been elected first vice-president of the Newberry Library, Chicago. Since 1948 he has served on the board of trustees of this institution. The Newberry Library is a privately endowed research library in the humanities. Its fields of collection cover Western civilization from the late Middle Ages to the end of the Eighteenth Century in Europe and Latin America and to the end of the Nineteenth Century in England and North America. Congratulations, Jim, on adding this honor to those you already have received. Jim is a life member of the M.I.T. Corporation and the retired chairman of Allstate Insurance Company. He is a director of Sears Roebuck and Company and Allstate Insurance Company and a trustee of Northwestern University and of Robert College in Istanbul, Turkey.

Another '07 member who has made a place for himself in the world is **Andrew Rebori**. An interview with him was reported at length in the Chicago Sunday Tribune some months ago, under the title "Dean of Old School Architects Still an Individualist." After leaving the Institute, he worked part time to further his education until he was awarded two scholarships, the second of which permitted him to study in Europe. In 1911, Rebori went to Chicago as professor of architecture at the Armour Institute. In 1955 he was named a fellow of the American Institute of Architects. Andrew designed the Loyola University Library, the Loyola Della Strada Chapel, the Streets of Paris in the 1933 Century of Progress Exposition, together with numerous theatres, apartment buildings, and offices in the Chicago area. He also designed the memorial over the burial ground of Colonel Robert R. McCormick, Publisher of the Chicago Tribune, in Cantigny near Wheaton, Ill., which was dedicated in 1957. Andrew is now a consulting architect and engineer at 165 Wacker Drive, Chicago. He says: "Today's architect is no longer an individualist but a follower and just wants to please his patrons."

Again I record with sorrow the death of another very loyal member of 1907, **Charles A. (Chick) Eaton**, on May 27, 1964, at Plantation Key, Fla. This news did not reach me until late in June. I wrote to Mrs. Eaton and the family and received a very gracious note from Chick's wife with the following information. As long ago as March, 1950, Chick had his first heart attack. He took excellent care of himself but had a second attack in September, 1957. He recovered from this and lived a full and active life until he had a fatal attack last May. Sunday night, May 24, Chick and Mrs. Eaton had dinner at the Islamorada Fishing Club, of which he had been a very active member since join-

ing in 1958. The next day he complained of a pain in his chest and went to the hospital for a checkup. It was found he had a leakage of the heart and should rest. Tuesday he took a turn for the worse and was taken to Overseas Hospital at Plantation Key, where he passed away peacefully May 27. Memorial services were held at the Coral Isle Church, and his ashes were spread on the clear blue waters of the Gulf Stream which he had learned to love very deeply. During World War I he served in the Coast Artillery, where he was commissioned a major and transferred to the Ordnance Department. With his brother, he formed at Atlantic City, in 1920, the Eastern Engineering Company. In 1955 Chick was called as a consultant and participated in the construction of the St. Lawrence Waterway and Power Project. Gradually, the Eaton firm forged a place among the foremost engineering concerns in the state and country. Under his direction, the firm built a dozen or more bascule bridges in New Jersey. Dredging and hydraulic equipment installations engineered by Chick can be found from New York State to North Carolina's Cape Fear River. He was an active member of the board of governors of Atlantic City Hospital and the Central Y.M.C.A. His wife Virginia, a son Charles, Jr., a stepson, and two daughters survive him. Truly he was another '07 man who has made the world a better place to live in because of his being here for nearly four generations.

A note from **Ed Lee** tells of his making another move in Florida. He writes: "I have been moving every year for three years and hope I am going to settle down this time." His new address is P.O. Box 158, Everglades, Fla. 33929. Please correct your address lists. . . . I have written a personal congratulatory letter to each '07 member whose 80th birthday has been noted in The Technology Review. Many of the men have acknowledged my letter and sent me some news about themselves or other '07 members. **G. Gifford Symes**, Course II was graduated from Yale in 1905, which college is naturally his first love. After leaving M.I.T., he spent 40 years in construction work and for the past 10 years has directed the Symes family affairs. His address is 11 Symes Building, Denver 2, Colo.

. . . A brief note from **Frank MacGregor**, VIII, included his zip number. He is apparently cleaning house and notes that he had donated several items to the DuPont Company's Hagley Museum in the old Powder Plant on the Brandywine Creek which was built in 1802. These items related to the era of 1916-1948 when Frank was active with DuPont. I commend Frank's thoughtfulness to many of the men in 1907, who have similar items that should be preserved now for posterity, as their families may not be familiar with their value.

It is a very long time since I had heard from **Ken Chipman**, III, who lives in Canada. His 80th birthday brought the completion of 15 years of retired life which he has thoroughly enjoyed. He reports that this coming winter he will give me a review of his life as an engineer. . . . After



I returned from a June weekend in New Hampshire, I wrote to "ME" MacGregor, VIII, telling of the trip we took up the Mt. Washington Cog Railroad. In reply, Mac told me of being in the mountains that same weekend. One day he took a 10-mile hike over Carter Dome (4,800 feet) and camped out at the Wild River Camp area, where the party caught and ate 40 trout for breakfast. He also stayed at Pinkham Notch Camp which was his headquarters for six years, while he managed the Appalachian Mountain Club Hut System. . . . An interesting note from Stan Wires, IV, informed me that he has been a great-grandfather since 1959. One granddaughter living in New York has a boy and a girl, and her sister, who lives in Scotland, has a son. This means that Stan, who had four children, has twelve grandchildren and now, three great-grandchildren. Thanks for this information, Stan.

As I write these notes, toward the end of August, word has been received of the death of **Albert Henry Donnewald, III**, at Shawnee, Okla., on Sunday, July 12, 1964. Many of our class will recall that Bert was very active in our undergraduate days in Tech Show, Technique and Class Day. After graduation he did engineering work in Canada and New Mexico, and then started work for the Prairie Pipe Line Company in the engineering department at Independence, Kansas. After the merger of the Sinclair and Prairie Companies, he was promoted to district superintendent for Western Kansas, with his headquarters in Wichita. Here he served the Sinclair people for 32 years. In 1938, Bert was transferred to Shawnee as district superintendent and was living there at the time of his death. He is survived by his wife Gertrude, a brother, and a married niece who was reared by the Donnewalds. Mrs. Donnewald responded very graciously to the letter of sympathy I wrote for the class to the family. . . . As your secretary was on Cape Cod for his vacation on September 11 and 12, he was unable to attend the Alumni Officers' Conference at M.I.T. and has asked President Robbins to write a report of that very interesting and informative get-together.—**Philip B. Walker**, Secretary and Treasurer, 18 Summit Street, Whitinsville, Mass.; **Gardner S. Gould**, Assistant Secretary, 409 Highland Street, Newtonville, Mass.

## '08

The first dinner-meeting of the class for the 1964-1965 season will be held at the M.I.T. Faculty Club, Memorial Drive, Cambridge, on Wednesday, November 4 at 6 P.M. Our 56th Reunion was celebrated June 12, 13, and 14 at the Melrose Inn, Harwichport, Mass., on the Cape, and at Alumni Day at Cambridge on June 15. Present at some or all of the doings were Bunny Ames, Bill Booth, Jimmy Burch, Nick Carter, George Freethy, Leo Loeb, Howard Luther, Miles Sampson, Henry Sewell, Charlie

Steele, Frank Towle and Joe Wattles. Their guests were Mesdames Ames, Burch, Freethy, Loeb, Sewell, Steele, Towle, Wattles and Mr. and Mrs. Franklin Wilde. Mrs. Wilde is Mrs. Ames' daughter. Saturday June 13 was Mrs. Ames' birthday, so Mrs. Smith, our hostess, provided paper cups, balloons, etc., at our tables on Saturday night, and with the desserts presented Mrs. Ames with a birthday cake resting on a music box playing "Happy Birthday." . . . We had a nice visit from **Frank Sherman** and his wife from Tucson, Ariz., on July 12. They were making their bi-yearly trip to New England. . . . I am sorry to report the death of **Sam Daddow** at his home in Pennsylvania during June.—**H. Leston Carter**, Secretary, 14 Roslyn Road, Waban 68, Mass.; **Joseph W. Wattles, 3d**, Treasurer, 26 Bullard Road, Weston 93.

## '09

Our 55th Reunion was most successful; the attendance was substantial, the location and weather were both ideal, and everyone appeared well satisfied and pleased. The schedule followed was that described in the class notes and in the notices that had been sent out in the spring. Classmates began arriving at the New Ocean House about 10:00 o'clock and met in the Priscilla Room which had been reserved for us. Luncheon, dinner, and the social hour were also held here. It was just a step from the broad verandah which faced the nearby beach and the Atlantic with its many landmarks. Our end of the verandah with its comfortable seating capacity, served as our headquarters all day. During the morning we enjoyed a pleasant get-together giving everyone an opportunity to become acquainted and to talk over present and past activities. Thirty-eight attended the one o'clock luncheon. During the afternoon some continued the session on the verandah while others walked about the hotel grounds and along the shore. About 5:30 P.M. there was a social and cocktail hour providing further opportunity for sociability. Dinner followed with 43 present. Dr. Vannevar Bush, '16, honorary member of the class and guest speaker, was introduced by President Scharff. (You will recall that he was also the speaker at our 50th Reunion at Snow Inn.) Van recounted some humorous incidents at the Institute, such as a student at commencement giving a quarter to the president when he was handed his diploma. He stated that modern youth is much more mature and better prepared than in our day; he is much better informed about world affairs and more interested in the humanities, finance, and economics. Van also emphasized that the Institute is recognized as the world's leading technical school and is expected to remain so. We were fortunate that Van could be with us and most appreciative of his coming.

After Van's talk, Molly called a business meeting at which the following officers were re-elected: President, **Maurice**

**R. Scharff**; Vice-president, **Thomas C. Desmond**; Secretary, **Chester L. Dawes**. **John Davis** was appointed Class Treasurer and **George E. Wallis** and **Francis M. Loud** were reappointed Assistant Secretaries. Molly called attention to the fact that for many years **Art Shaw** has not only been our Class Agent but our representative on the Alumni Council. John Davis reported that there was approximately \$1,000 in the Class Treasury before reunion expenses. The Class Secretary and John Davis, Reunion Secretary, read several letters from classmates who were unable to attend. (These letters, or summaries of them, will appear in coming numbers of The Review.) The Secretary was instructed to telegraph greetings from the reunion to **W. Craig Ferguson** in Walla Walla, Wash., expressing regrets that he was unable to attend because of a recent illness, and extending best wishes for an early recovery. The Secretary received the following reply from Fergie: "I was very pleased to receive your wire and appreciate the greetings and well wishes from the class. Ever since the 50th Reunion I had planned on attending my 55th—but it was not to be. I am recovering very well and my strength and endurance are returning. I have much to be thankful for."

**Art Morrill** gave a brief talk on the health and economic conditions in Venezuela and how the United States can most effectively direct its aid program. He plans to write further details of the conditions in Venezuela for inclusion in subsequent class notes. . . . Those present at the New Ocean House were Phil and Mrs. Chase, Henry Colson, Howard and Ruth Congdon, John Congdon, John and Margaret Davis, Chester and Muriel Dawes, Charles and Celia Freed, Derick Hartshorn, Leon and Ruth Healy, Blanche Johnson, Lester and Louise King, Francis Loud, Arthur Morrill, Sr., Arthur Morrill, Jr., Lewis and Doris Nisbet, Joe Parker, Ben and Barbara Pepper, Maurice and Jeanne Scharff, Dr. and Mrs. Thomas Sexton, Debby Sexton, Art and Betty Shaw, Laurence Shaw, Henry and Madge Spencer, Ray and Marian Temple, Albert Thornley, George and Marcia Wallis and Melville Weill. John Congdon, '57, son of Howard and Ruth, has attended several alumni meetings with '09 before, while a student at M.I.T. He has received his M.I.T. degree and is now with Adams-Russell Company of Waltham. Art Morrill, Jr., received his degree from the University of Michigan and is now a cost accountant with the Ford Motor Company in Detroit. Mrs. Sexton and Debby are the daughter and granddaughter of Blanche Johnson.

Monday morning the class departed for the Institute and Alumni Day. Being among the senior classes, '09 had a table reserved for the luncheon under the big tent in DuPont Court. There were 35 of us present. Included were **Tom** and **Alice Desmond**, **George Bowers**, and **Julius Serra**, who were unable to be at Swampscott. Following the business meeting of the Alumni Association and a discussion on Institute affairs by Dr. Stratton, particularly with relation to the revised educational program (a report of which ap-



peared in the July, 1964, issue), we adjourned until the social hour in the Armory. At the Alumni Dinner which followed, we were joined by **F. Gardiner Perry**, who had been unable to attend the earlier class events. The evening's entertainment was a concert by the ever popular Boston Pops Orchestra. This also concluded a most happy and successful 55th Reunion when "good fellows" with their families and friends did "get together." There were present 25 class members, 16 wives, 3 children, and 1 grandchild, **Debby Sexton**. We highly commend **Art Morrill** who came from faraway Caracas, Venezuela, to attend the reunion. For years, under the World Health Organization, he has been improving health and sanitary conditions in several foreign countries and is now continuing the good work in Venezuela. **Blanche B. Johnson** (Mrs. **Lewis H.**) should also be highly commended for her continued interest in the class. As may be recalled, she attended our 50th Reunion accompanied by her daughter, Mrs. **Sexton**, and granddaughter **Debby**. Praise is also due **Leon** and **Ruth Healy** who drove all the way from Milwaukee, the second longest distance.

**Mayo D. Hersey** wrote that he could not conveniently attend the reunion and Alumni Day and would "miss the pleasure of seeing you and other friends including **Francis Loud** and perhaps **Franklin Hunt**. Did you know that **Dorothy**, **Franklin's** wife, died suddenly in the spring of 1963? I don't recall if the fact was reported in the Class News. I saw **Lester King** and his wife in Hartford last month. My appointment has been renewed for another year at Brown as visiting professor of engineering (research). We plan to spend the summer as usual at Monument Beach, Mass." . . . **Mayo** also reported the death in September, 1963, of **William F. Wells**, IV, VII, a biologist. The secretary knew **William Wells** very well since he was a member of the Sanitary Engineering Department at Harvard from 1930 to 1938 where he specialized in bacteriology. He resigned to join the Department of Bacteriology at the University of Pennsylvania and in 1943 became a professor in the School of Medicine. In 1957 he joined the Air Hygiene Unit, Veteran's Administration Hospital in Baltimore.—**Chester L. Dawes**, Secretary, Pierce Hall, Harvard University, Cambridge 38, Mass.; Assistant Secretaries: **George E. Wallis**, Weymouth, Mass.; **Francis M. Loud**, 351 Commercial Street, Weymouth 88, Mass.

## '10

During the summer I received notices of the death of three classmates. **Helen L. Fales** died May 31 in Red Bank, N.J. She was one of the coeds who was with the class for four years and graduated as a chemist. Until her retirement she was with Nestles Chocolate Company and the Rockefeller Foundation. . . . **Holman I. Pearl** died June 24. His wife, **Hazel**, wrote as follows: "Our beloved **Holman** died June 26. In May he underwent an operation, and his final illness was mercifully

brief. He had a good life and enjoyed it to the fullest. We had celebrated our golden wedding on May 5." . . . **Clifford G. Sherman** died June 24. He was vice-president, general manager and a director of Grinnell Company of Canada, Ltd., in which organization he served 57 years.

The attendance at Alumni Day in June was as follows: **Robert Burnett** and his wife; **Ralph Horne** and his wife; **Edward Kollen**; **Carl Lovejoy**; **George Lunt**; **Harold Manson**; **Murray Mellish** and his wife; and **Charles Wallour**. . . . **John Gray** has been honored with a fellowship in the American Institute of Architects. This honor was extended to **John** for the services he has given to the architectural profession during the past 55 years.

**Ralph Horne**, former president and now director of the noted Boston engineering firm of **Fay, Spofford and Thorndike**, has been honored by the firm on celebration of its 50th anniversary this summer through the establishment of the annual **Ralph W. Horne Award**. The **Horne Award** will go each year to the member selected by the Boston Society of Civil Engineers as outstanding in giving freely of his time and effort in unpaid public service. **Ralph** is currently vice-chairman of the Malden Redevelopment Authority and has served on the unpaid authority since its inception almost seven years ago. . . . I had the pleasure of dining with **Harold Akerly** and his wife one evening this summer when we accidentally met each other in the same restaurant. . . . **Walt Spaulding** and his wife made their annual trip to the States from Hawaii, and **Walt** and I had the pleasure of having dinner together and discussing old times.—**Herbert S. Cleverdon**, Secretary, 120 Tremont Street, Boston, Mass.

## '11

Attending the Alumni Day luncheon were **Gertrude** and **O. W. Stewart**, **Helen** and **Carl Richmond**, **Morris Omansky**, **Bill Coburn** and myself. The **O. W. Stewarts** remained for evening activities, as I did. However, my son (a member of the 25 year class, as is **Stewart's** son) had to leave for a business trip in the afternoon, so I joined his wife and the Class of '39 for the evening. . . . **Alec Yereance** had planned to come from his summer home in Harwichport, but the arrival there of his daughter, son-in-law and six grandchildren interfered. . . . **Lish Fales** stopped in to say hello to M.I.T. Professor **Ober** on June 12. Still very active in aerodynamic research for the Atlantic Research Corp., Alexandria, Va., he was just too busy to stay for Alumni Day. . . . The M.I.T. Women's Association had an Alumnae Art Exhibition in the superb new dormitory for women. Among the exhibits was an oil by **Frieda (Omansky) Cohen**, '45, daughter of our **Morris Omansky**. . . . At the luncheon I had a chat with **Lawrence H. Bailey**, '15, a fraternity brother of our **C. H. Sayre Merrill**. I learned **Sayre** is happily located in Exeter, N.H., with two hobbies—bird watching and railroading. After serving two terms in the House of

Representatives, he found it encroached too much on his retirement so he quit. The **Merrills** have a son and daughter.

**Jim Duffy** visited the other side of the world again his summer. I had cards from him commenting on the gold teeth of the Siberian natives, his search for relics of the Ark at Mt. Ararat, following in the footsteps of **Genghis Kahn** and **Tamerlane** in Samarkand, and riding in an International Harvester bus in Afghanistan. . . . **Carl Richmond** wrote from Maine: "Helen and I have spent the whole summer in a cottage on the shore of **Searsport, Maine**. From our cottage we look six and one-half miles across **Penobscot Bay** to **Castine**. We are now watching (thanks to binoculars) the annual race of over 15 yachts out of **Castine**. All must have 'operators' born in Maine, retired and over 60 years old. Five of them are over 80 and one is said to be 93." He included a clipping from the local paper reporting the destruction of a summer home in **Cushing, Maine**, occupied by the **Marshall Comstocks**. Fortunately **Helen**, **Marshall** and their daughter's family were away at the time. . . . **Ottillie Cushman** sent a clipping from the **Oklahoma City Times**. Interviewed by a feature writer on the occasion of a square dance festival, it developed that **Paul** and **Ottillie** probably dance about 364 miles in the course of a year. "We go to at least three or four dances a week, and we dance every dance," said **Dr. Cushman**. . . . **Harry Tisdale** wrote from Florida: "Grace and I are going along about as usual, but I have not been far from the house for the last year and a half. . . . **Phil Caldwell** telephoned me in March from **Nakomis** that they were unable to make it down here as they had to head for home at **Wilton, Conn.** . . . **Barbara** and **Willis Hodgman** of **Taunton, Mass.**, were here for a short visit and paid us a nice call before they left."

**Cleon R. Johnson**, X, died in **Wyckoff, N.J.**, on May 1, 1964, from emphysema. He had been in only slightly declining health until a month before his passing. After graduating from M.I.T. he joined **Goodyear Tire and Rubber Company** and became chief chemist; and after World War I, director of development. During World War I he served as a major in the Gas Defense Division of the Chemical Warfare Service. . . . During the twenties he was technical director for **Godfrey L. Cabot, Inc.** During the thirties he was technical director of **Witco Chemical Company**, also suppliers to the rubber industry. During World War II he was associated with **Ridbo Laboratories** in **Patterson, N.J.**, where he developed an accelerator device. In 1948 he bought the patent and other rights from **Ridbo** and formed **Spencer Products Company, Inc.** of **Bloomington, N.J.**, to manufacture and sell the product. He served as president until his retirement in 1963, when he was succeeded by his son, **Spencer**. He always maintained a deep interest in M.I.T. Another of his interests in recent years was the **United World Federalists** which he served on the State Council and as a delegate to the National Assembly. He is survived by his wife, **Gladys H. (Spencer)**, a son, three daughters and

eight grandchildren. . . . Changes of address: **Norman Duffett**, 151 Buffalo Avenue, Niagara Falls, N.Y. 14303; **Harold L. Robinson**, 34 Laurelwood Road, Holden, Mass.; **Norman S. Wade**, 11 Evergreen Road, Manchester, Conn. 06040; **Erving M. Young**, 19 Aspen Road, Orange, N.J. —**John A. Herlihy**, Treasurer and Acting Secretary, 588 Riverside Avenue, Medford, Mass. 02155.

## '12

At Alumni Day last June were John L. Barry, Fred H. Busby, William L. Collins, John C. Freeman, Dr. and Mrs. Jerome C. Hunsaker, Walter W. and Mrs. Lang, Wallace J. and Mrs. Murray, Jonathan C. and Mrs. Noyes, Frederick J., Jr. and Mrs. Shepard, Cyrus F. and Mrs. Springall, and L. G. and Mrs. Walsh. . . . **Linzee S. Hooper** passed away in Hingham, Mass., on June 12. Linzee made a name for himself on our freshman football team. . . . **William H. Ahearn** passed away in New York, May 8, 1964, following an illness of several months. After leaving the Institute, Bill went with the Boston Elevated Railroad, later transferring to the Eastern Massachusetts Street Railway Company. He became associated with the Beeler organization in 1918 in consulting work which he followed for 22 years. He was in charge of many of the largest investigations and surveys in the United States and Canada. In World War I he was transit expert on the staff of the Public Utilities Commission of the District of Columbia. During World War II he was chief, transit section, Office of Defense Transportation.

**Harold G. Watkins** passed away in Boca Raton, Fla., on July 8. Harold had been in railroad work in Cleveland for the whole of his active career. **Holman I. Pearl**, who started with the Class of '10 but graduated with us in 1912, passed away June 27 in Houston, Texas. Holman spent his life as a mining engineer working over the South and West. . . . **Walter W. Lang** was recently honored by the New England Section of the American Chemical Engineering Society as a 50-year member. He is at present actively employed at the Instrumentation Lab at M.I.T. working on Project Apollo for NASA. . . . Arrangements have been made for an interim 1912 reunion next June to be held on campus. We will be lodged in McCormick Hall, the new women's dormitory. Full details will be sent you a little later, but do start planning to be with us.—**Frederick J. Shepard, Jr.**, Secretary, 31 Chestnut Street, Boston 9, Mass.; **John Noyes**, Assistant Secretary, 3326 Shorecrest Drive, Dallas 36, Texas.

## '13

Well, this is a start of another year of very delightful association with our many classmates. Do you realize that about a

year ago you voted two to one to hold an interim reunion in June, 1965? Also, you voted three to one to hold this reunion on the Cape rather than in the vicinity of Cambridge? You will have received the reminders of 1964-1965 Class Dues. Please express your views whether you would prefer Oyster Harbors Club, where we must share the facilities with another class, or have your committee arrange with a smaller motel, where we can celebrate our 52nd reunion without sharing the premises. . . . Alumni Day on June 15, was enjoyed by 11 '13ers including Charles Thompson, Bill and Ellen Brewster, Al and Emma Brown, Gene MacDonald, Bill Eichorn, Phil and Roz Capen, Phil Terry, Heinie and Mrs. Glidden, Lester and Ethel Gustin, Charlotte Sage, Walt Muther and his charming daughter, Mrs. Ed Lawton and her children, Cynthia and Edward. Wish you were there. . . . It is with a heavy heart that your scribe learned of the death of Marie Blood Fiske, the dear wife of Charlie Fiske, '14, on June 13. We have known them both since our days at the 'Stute. . . . The Alumni Office, that is Fred Lehmann, '51, the illustrious Secretary, has forwarded the names and addresses of all class members of 1913, which is up-to-date as of June 2, 1964. Our total membership is 247. . . . It is very regrettable for us to announce that Chick Kane, '24, has received and accepted the resignation of that great fellow, **Larry Hart**, who has served M.I.T. and the Class of '13 very efficiently for many years as the Class Agent for the Alumni Fund. We know all of you join us in thanking Larry for his untiring efforts, and we now wish him lots of joy and pleasure. It is hoped, now that he has not such a heavy schedule of activities, that we shall hear more often from Arny and Larry.

We were overjoyed to read of the 50th anniversary celebration of **David Stern** and his bride. From the picture in the Boston Traveler, they appeared very young and happy. Yes, too young to have two children, four grandchildren and one great-grandson. Congratulations, and we hope to see you both soon. . . . We are greatly indebted to W. Craig Ferguson, '09, for forwarding a clipping from the Walla Walla Bulletin of May 19, 1964. This referred to the early romance of **Harold** and **Mary Crawford** which occurred on the campus of Whitman College and their marriage 50 years ago. Both of these dear people graduated from Whitman College, Harold in 1911 and Mary in 1912. While at Whitman they were affiliated with Phi Delta Theta fraternity and Delta Gamma sorority, respectively. Harold and Mary were married on May 15, 1914, in Spokane, the year following Harold's graduation from M.I.T. with an architectural degree. Harold served as the architect for many of the buildings, on the Board of Overseers, and was recipient of an honorary degree of doctor of science from Whitman College. They have both been interested in community affairs of Walla Walla through the Rotary Club, memberships in several patriotic societies, and symphony organizations. So with two daughters and four grandchildren, our very dear friends

still enjoy very active business as well as social lives. It has been a great pleasure for us all to have known the Crawfords, so we offer our congratulations and hope they will continue their worldly travels for many more years. We shall be looking for them come June, 1965. . . . The **Capens** enjoyed a weekend visit from **Charlie Thompson** about July 24. We toured the upper Cape and enjoyed a very pleasant lunch in Plymouth. We called on the **Brewsters** but learned later from a note from **Bill** that they were enjoying a weekend at camp. We finally located **Ed Hurst** in Duxbury and enjoyed a few minutes of jovial conversation with him. We were disappointed to learn that Charlotte was resting following a hospital sojourn and a broken arm. We hope that one of our class sweethearts has regained her good health again. We are looking forward to a near future get-together with you good people soon.

Again it has been your Secretary-Treasurer's pleasure to be a guest of the Alumni Association for a two-day conference at the Institute. These Alumni Officers' conclaves are very enjoyable both from a refresher point of view as well as for renewal of acquaintanceship of other class representatives from '96 to those of '65 or even '67. . . . Again we marvel at the continual changes and expansion of our own M.I.T. It makes a member of the Alumni a prouder and more loyal worker. "Give to the College of your Choice." . . . We have been informed by the Alumni Office that **Ellis Brewster** has been appointed our Class Agent. We know you will all co-operate with Bill as you have over the years with Larry Hart. . . . We have received a welcome letter from **Sam Rogers** and we quote: "My wife and I have just returned from a nine months' trip, cruising by Wilhelmsen Line Norwegian freighters to Australia and New Zealand via western and southern European ports and the Suez Canal and return. I hasten to send you a check for \$4 to cover my class dues to June 30, 1964, and also to June 30, 1965, to save us both work. An interim reunion anywhere, anytime, is all right with us and we will do our best to attend; sorry we could not make the 50th." . . . If you like our line or you want to see your name in print, take that pen in hand or bang out your inner thoughts on that old model "Royal" or "Remington," or send us a postcard describing your follies, your hobbies, or just your "old routine." —**George Philip Capen**, Secretary-Treasurer, 60 Everett Street, Canton, Mass.

## '14

Well it's all over now, the 50th Reunion. And what a party it was! First, on Saturday, the Commencement. Fifty-odd '14ers capped and gowned were led docilely by Chief Marshal **Les Hamilton** in his top piece, an overgrown crimson powder puff. We listened to President Stratton deliver the commencement address and watched while hundreds of graduates and post graduates were hand-



ed their degrees. We wondered at the organization that made it possible for each of the members to receive exactly the degree due him. (Later, President Stratton in an informal mood related how one of the graduates had placed a shiny 25-cent piece in his palm which he did not notice until later.) At noon there was a luncheon in a huge tent in the Great Court. **Ray Dinsmore**, as featured speaker, made a serio-humorous talk that was the hit of the day. Later at the Charter House there was a class get-together and dinner with wives present. It was agreed that the class had missed something by not having them present at earlier reunions.

There were some slides shown, taken 50 years ago, also some of the **Pine Orchard Reunion** 15 years ago. One slight 'faux pas' was the inclusion in the last group of slides (a supposed stag affair) of several shots of young ladies explained as waitresses and chambermaids. But all was forgiven eventually as the nostalgic orgy finally broke up. . . . A highlight of the reunion was the appearance of **Charlie Fiske** who not many weeks before had been hospitalized with a stroke; he now occasionally uses a cane, but has a "head clear as a bell." . . . The reunion festivities went off like clockwork thanks to the general planning and a local committee of hard working individuals like **Lin Faunce**, **Les Hamilton** and **Harold Wilkins**. **Art Peaslee**, also part of the committee, was prevented from being there by illness. The women's committee led by **Florence Richmond** and including **Alma Hamilton**, **Marion Wilkins** and **Mildred Morrison** performed nobly. **Florence** entertained all of the women at the Richmond home Saturday evening while the men enjoyed a stag party. This was a mixture of camaraderie and sobriety, punctuated by reminiscences and stories. There was an interesting excursion on Sunday to the Dedham Polo and Country Club with an excellent lunch. Truth compels us to admit that none of the class engaged in any physical exertions.

Some class business was also transacted. **Charlie** and **Rich** begged to be relieved of their jobs and after some discussion it was voted to elevate them to president and secretary emeritus. A nominating committee was chosen consisting of **Harold Richmond**, chairman, with **Skip Dawson**, **Chet Ober**, **Lin Faunce**, **Paul Owen** and **Bert Hadley** as members. They brought in a proposed slate of new officers: President, **Ray Dinsmore**; Secretary, **Herman Affel**; Assistant Secretary and Class Agent, **Dinny Chatfield**. They were elected by acclamation. The class also approved a proposal that the aforementioned nominating committee, plus the old officers and the new officers, should continue as an executive committee with power to choose new officers in case of death or incapacity in the interim before the next reunion. . . . Those present for all or part of the Reunion Festivities included: **Herman** and **Dorothy Affel**, **Henry** and **Helen Aldrich**, **Francis Atwood**, **Percy** and **Elinor Benedict**, **Harold** and **Dorothy Bent**, **Roswell** and **Hetty Barratt**, **Howard** and **Mary**

**Borden**, **Rucker Bristow**, **Tom** and **Louise Callahan**, **Hugh** and **Lois Chatfield**, **Philip Covitt**, **Thorn Dickinson**, **Elmer** and **Maude Dawson**, **Ray** and **Violet Dinsmore**, **Levi Duff** and daughter **Nan**, **Frank** and **Evelyn Dunn**, **Walter Eberhard**, **Dean Fales**, **Linwood** and **Florence Faunce**, **Charles Fiske**, **Ted** and **Vivian Gazarian**, **John Giffels** and **David Gould**.

Also **Bert Hadley**, **Leigh** and **Marjorie Hall**, **Oliver Hall**, **Leicester** and **Alma Hamilton**, **Te-Ping** and **Pauline Hsi**, **Fred** and **Margaret Karns**, **Walter** and **Fama Keith**, **Ted Krueger**, **William** and **Beatrice McPherrin**, **Mildred Morrison**, **Chet** and **Pauline Ober**, **Paul** and **Marjorie Owen**, **Roy** and **Marjorie Parsell**, **Ralph** and **Bea Perry**, **Arthur Petts**, **Jim** and **Aminda Reber**, **Harold** and **Florence Richmond**, **Clyde** and **Ruth Ross**, **Frank** and **Viola Somerby**, **Eugenio Garza-Sada** and his wife, **Werner Schaurte**, **Dwight** and **Leslie Stump**, **Bob** and **Maude Townend**, **Russ Trufant**, **Alden Waitt**, **George** and **Ruth Whitwell**, **Harold** and **Marian Wilkins**, **Harry Wyld** and **Rudy** and **Jessie Zecha**.

Several '14ers took excellent pictures during the reunion activities. Your secretary has these slides and negatives, mostly slides. If you were present (or perhaps not) and would like your own copies of these, drop us a line saying whether you would like slides or prints and how many, we will send them along at cost.—**Herman A. Affel**, Secretary, R.F.D. # 2, Oakland, Maine; **Ray P. Dinsmore**, President, 9 Overwood Road, Akron, Ohio; **Charles H. Chatfield**, Assistant Secretary and Class Agent, 177 Steele Road, West Hartford, Conn.

## '15

Hello everybody! Here beginneth the first column of the new season with the hope you and your families have enjoyed a pleasant and happy summer. Only eight months to our 50th Reunion, and let's all gather there. In September, 1963, a questionnaire card regarding reunion preferences was mailed to the entire Class. Only 37 per cent answered and they were preponderantly in favor of having a stag reunion somewhere on Cape Cod, run as our previous reunions have been. The class Executive and Reunion Committee accepted this choice and have begun to plan accordingly. It is assumed that the 63 per cent who did not bother to return the card have no interest in the reunion and probably little interest in the class or M.I.T. Here is the tentative Reunion Program: On Friday morning, June 11, we will meet at M.I.T. headquarters to be robed in caps and gowns (furnished by M.I.T.) and walk in the academic procession to Commencement in reserved seats; at 1 o'clock we will be guests of President Stratton at the Commencement luncheon; at 3 o'clock we will leave Cambridge in transportation furnished for our stag reunion at Coonamessett Inn, North Falmouth, Mass., where we were in 1950 and 1955. Saturday will be a regular reunioning day with all the usual indoor and outdoor activities. Sunday noon we will take

the class picture (sent free to everyone attending) followed by a New England shore dinner; Sunday afternoon we will return to Boston. Monday, June 14 will be Alumni Day at M.I.T. We will register in the morning, attend the talks and visits in the morning and afternoon, have lunch at special tables in the Great Court and at 4:00 o'clock hold our Annual Class Cocktail party at the nearby M.I.T. Faculty Club. The Alumni Dinner with the famous Boston Pops orchestra for special entertainment will close the day and the reunion.

For the ladies, Mrs. **Clive W. Lacy** heads an able and active committee of class ladies, who, on Saturday afternoon, June 12, will hold a tea, guided tour and musicale at the Isabella Gardner Museum in Boston. The ladies will then join us at M.I.T. on Monday. There will be plenty of desirable and convenient hotel and motel rooms available in Boston and Cambridge. We suggest you plan to arrive here Thursday to be ready for Commencement on Friday. You will be hearing from the group of devoted classmates who have agreed to be course representatives to contact a few men in their courses. There will be no solicitations for funds nor contributions. They are doing their part—you do your part and come to the reunion!

Attending Alumni Day activities this year were: **Larry Bailey**, **Earle** and **Beulah Brown** (San Francisco), **Henry** and **Frances Daley** (Philadelphia), **John Dalton** (Providence), **Ray** and **Mrs. Delano**, **Larry Landers**, **Archie Morrison**, **Ben Neal** (Lockport, N.Y.), **Wally** and **Ardell Pike**, **Pirate Rooney**, **Admiral Bill Smith** (recently returned to Boston) **Fred** and **Mrs. Waters**, **Easty Weaver**, **Pop Wood** (Peterboro, N.H.) and **Max Woythaler**. These, with enough others to total 60, attended our Annual Class Cocktail Party at the Faculty Club, where the climax was the appearance of **Hank** and **Virginia Marion**. We were all delighted beyond words to see them, and we certainly appreciate all his and Virginia's brave efforts to get there. There's real "guts" and class spirit. Wonderful! More than half there continued on to the Algonquin Club in Boston for a delicious dinner and enjoyable evening. And, again, good **Al Sampson** voluntarily and generously underwrote the deficit at the club, beyond our nominal charge for the dinner. Many thanks, **Al**. His description of **Hank** and **Virginia's** arrival is the best way to describe the afternoon and evening. "For 1915—The Class Supreme—the highlight of 1964 Alumni Festivities came on Monday, June 15, at 4:16 P.M. when our Virginia Marion proudly came into the Faculty Club Cocktail Party bearing on her right arm her beaming husband **Hank**. The welcoming roar accorded them registered 10.5 for a new high on the M.I.T. seismograph, and, it was a well deserved welcome to reward **Hank's** many months of acute suffering and **Virginia's** loyal and loving encouragement during those despairing days and nights of predicted catastrophe. Rarely will one witness a finer display of will power, sheer determination, and intestinal fortitude by both against hopeless



odds. Let it ever be an inspiration to us all should adversity beset us. From four until six o'clock Barbara and her hand-maidens, Calorie, Vitamin and Metrecal, assisted Drs. Schenley, Gordon, Caldwell and Haig in their Four Panel Discussion 'Nature Abhors A Vacuum', and at its conclusion these eminent authorities were given warm applause for their spirited performance. Edifying and inspiring post-prandial features were Maestro Fiedler's renditions of tympanic membrane pleasantries at the Kresge Auditorium, and Sachem Rooney's ceremonial counting of the Class Wampum at the Algonquin Teepees with the customary gastronomic garnishes of mush, helgramites, and moose milk. It was a Golden Day in a Golden Age for us all with its Golden Memories that never tarnish with the years but seem to brighten with old acquaintance. All too soon 'There came the Dawn/With rosy lustre/Purpled o'er the lawn/detransmuting a Golden Yesterday into a metallic dross of silvered hair and leaden feet.'

For the **Harry Murphys**, Lucy wrote: "All the Murphys wish to thank you for a lovely party. The cocktails were excellent as usual and the dinner just perfect. It really was a very nice evening, and we enjoyed every minute of it. Good wishes and kind regards." Virginia (Thomas) Johnston was with us from Princeton and wrote: "I had a wonderful time with the class. The classmates had changed very little since my last visit. What really rocked me was the younger generation who are stealing my stuff—Bill Sheils and his wife Jeanette, handsome Jerry Rooney, all the attractive Murphys, David Hamburg and Dave Eisenberg's sons. I want to thank Al and the Class for such an enjoyable day." Don't worry, Virginia, as the Class baby, you will still be our 1915 Pin-up Girl. . . . In July I attended the Gordon Research Conference at Colby Junior College, New London, N.H., as a "social guest" (I could never qualify technically) and met a number of M.I.T. men in the textile and allied industries: Sid Edelstein, '32; Walter Hamburger, '21, Ed Lynn, '37, Jay Goldberg, '26 and undoubtedly many others whom I did not know. While there, I spent a pleasant afternoon with **Speed Swift**, who will give a showing of his famous "Help Azel" movies at our reunion. He wrote: "Just a line to say how nice it was to see you the other day. Too bad, it turned out to be so short a visit. I am looking forward to our 50th next June, and hope to take in the fall class dinner in Cambridge. Regards to Fran." . . . **Earle Brown** wrote from San Francisco: "It was wonderful to visit with the Class and to see Fran and you again. We had a good time later, in New York including seeing the Fair. Since returning I have been very busy and need another vacation, but we both are feeling fine." . . . **John Dalton**, Providence, wrote: "This summer I had a visit from **Lucius Bigelow**, who was in Providence on his annual visit. He is in excellent health and has a fine position in his retirement with a research company in Durham, N.C., run by his former students. No flies on Lucius. I have some relaxation with

bridge or golf."

On a piece of old fashioned linen finished paper with the small M.I.T. seal in red, **Maurice Brandt** wrote from Salisbury, N.C.: "Speaking of our Reunion, here's a piece of stationery I got at **Andy MacLachlan's** more than 50 years ago." Nostalgic. While researching at M.I.T., **Phil Alger** came by to see Fran and me. He is still at Rensselaer Polytechnical Institute and was on his way to Europe to give a few scientific papers and do some sightseeing. In August he published a new book "The Nature of Induction Machines" (Gordon and Breach). This updates his earlier book in 1951 on "The Nature of Polyphase Induction Machines." . . . The April issue of "Kane's Licensed Beverage Review" carried a good looking picture of our **Sam Berke** with a long write-up of his activities in the distilling business. Sam owns and operates a large Guernsey breeding and milk farm in Lakeville, Conn., he is vice-president and trustee of the Indian Mountain School, Lakeville; on the President's Visiting Committee, Department of Humanities at M.I.T., member of the American Guernsey Cattle Association, Peterboro, N.H., and a loyal and generous 1915 man.

**Jerry Coldwell**, who was unable to make the Class Cocktail Party on Alumni Day wrote: "Early in June I am going to Alaska to look over our defense installations there. It should be an interesting and instructive trip and I may have a chance to see something of Alaska other than our defenses." What a guy! Incidentally, Mrs. **Opal Purinton**, writing for **Forrest** from Middlebury, Conn., gives us some interesting news of themselves, and we hope they cash in on the odd coincidence of her knowing **Jerry Coldwell's** wife, **Verta**. "Foss should be writing to you but he feels no one in '15 class will remember him so why send any news! I tell him we are coming to your 50th Reunion so he better get his name on the list. This year instead of wintering in Venice we will be in Naples, Fla., after November 15. After two heart attacks we need to leave the chilly winter winds. Address, 1755 Third Street, South, Naples. Noticed in class news **Jerry Coldwell** was in Naples and as I knew a 'Verta' looked her up in Simmons catalogue to find it is the same **Verta Mills**, so hope they return this winter. Our news of last year was the arrival of twin grandchildren—a boy and a girl to a family of three boys! So herewith is a little news for your column."

With birthday congratulations to **Fran** and me, **Tess Hilton** wrote from Clearwater, Fla.: "We are both pretty well and young enough to enjoy martinis. (And how they do.) Thanks for the hats from the Class Cocktail Party, designed by **Al Sampson**. We will take one over to **John Homan**." . . . **Dave Hughes** sent me, from Los Angeles, the directory of the "M.I.T. Club of Southern California." An attractive and impressive booklet, it lists 14 men from 1915 as members. **Bob Welles** is a governor-at-large and **Ray Stringfield** the immediate past president. Congratulations to our Classmates out

there. . . . **Herm Morse**, Akron, Ohio, wrote that on June 15 he planned to fly to London with Mrs. Morse, his younger daughter, her husband and their two children. Last year he took their older daughter, her husband and their two children on a 30-day tour of Europe. He is looking forward to Boston in 1965. Surely, Herm is a generous father. . . . In answer to our invitation to **Ben Neal** to stay with us at Alumni Day, he wrote: "I trust **Frannie** will forgive me my tardiness in thanking her for her most cordial hospitality. You will note I am not including you in this, because, after all, being the 'Paid Class Secretary' you do have some obligations; and besides the only thing that would be fitting and appropriate for your kindness would be a case of liquor, and at the moment my liquor license is all used up!" Ah, me, how your hard working underpaid Class Secretary has to suffer! . . . A fine letter came from **Bill Spencer**, Baltimore: "I have received the two Class of '15 notices concerning the Alumni Day events and the Class Cocktail Party. I am sorry that long standing plans will prevent me from joining with you all on June 15 and the preceding weekend. You all will be very much in my mind however, and I extend my very best regards to all classmates, friends, faculty and their ladies. Especially remember me to **Barbara Thomas** who has been such a loyal ex-officio member of 1915 for many years. Certain events, here in Baltimore are jamming the last days of May and the first half of June. My younger son, **Richard**, is home here now to enjoy his 20th reunion with his class at **Johns Hopkins**. I have been active in A.S.C.E., S.A.M.E., and the Maryland Academy of Sciences, of which I have been Secretary of the Science Council the last two years. All are closing their affairs for the summer with award dinners, etc., in which I am involved. You may be sure that my plans are now being arranged so that I may be in the Massachusetts and Boston area during the two middle weeks of June in 1965. I send my very best regards to you all. I am well and feeling fine."

**Ed Walker**, who owns and operates the Kozak Auto Dry Wash Company, Batavia, N.Y., says: "A national advertising agency once described me as the only man who had to get a doctor's degree from M.I.T. to learn how to make a rag to clean a car, which I have been doing for 38 years." And, doing it well and profitably, eh, Ed? I've just interrupted these notes (Tuesday night September 1) to phone **Hank Marion**, and I am happy to tell you that **Hank** has come a long way ever since we saw him and Virginia here in June. He can walk without the use of 'walkers, crutches or braces' and is generally in good shape. The hospital people have checked him thoroughly. Virginia and he had just returned from a long motor trip to the far west to visit their daughter **June** and her family. **Hank** drove a good deal of this distance. This is all good news, encouraging and cheerful to learn of his splendid improvement. **Hank** assures us of being at our 50th—a pleasure and an inspiration for us all. Good going, **Hank**, and all the

best to continue your steady improvement to a complete recovery. . . . In July, on a trip through Vermont we spent an evening with **Bill Campbell** at his ancestral farm in Manchester Depot. Bill boasted that he now has the house painted but from our previous experience, saved by bourbon, we are chiefly concerned whether or not he can keep his 1743 house warm. We lunched and enjoyed an afternoon with **Boots** and **Helen Malone** at their luxurious place in Chester. **Henry Leed** and his wife were visiting them the next day. That evening we had one of Elizabeth Baker's tasty chicken dinners with a native strawberry shortcake followed by a comfortable evening of interesting conversation—no television or radio! These friendly visits with old classmates are very heart warming to Fran and me.

It's sad to record the loss of another fine, outstanding classmate. **Ralph Curtis** died July 4 in West Springfield, Mass. Ralph was president and treasurer of Curtis Universal Joint Company, Springfield. He was past president of the Engineering Society of Western Massachusetts, a member of American Institute of Electrical Engineers, and former chief engineer of the Western Massachusetts Electric Company and the Philadelphia Gas, Power and Electrical Company. He was a former West Springfield town meeting member, a former trustee of West Springfield Public Library, local honorary secretary of the M.I.T. Alumni Association and a registered professional engineer in Massachusetts and Pennsylvania. He was a member of Mount Orthodox Lodge of Masons of West Springfield, a member of Melha Temple and Shrine, and past secretary of the Springfield Kiwanis Club. He leaves two daughters, Mrs. Elliott E. Babb of Longmeadow and Mrs. Richard M. Hartman of West Springfield; an aunt, Miss Ruth A. Curtis of West Springfield; and seven grandchildren. Ralph was at our 45th Reunion and sent souvenirs to our Boston Class dinners. He had always been an active, interested and generous supporter of all class and alumni affairs. We will certainly miss him.

**Imogene Cowles** sent us some details on the sad passing of **Warren**. He was health officer of the Hackensack (N.J.) Water Company for 35 years, until his retirement in 1961. He lectured at M.I.T. on watershed sanitation, city planning and real estate subdivisions. He served as president of the Ridgewood Board of Health in 1948 and later became a member and chairman of the Village Planning Board. He was a member of the Bergen County and New Jersey Health Officers Association; Public Health and Sanitation Association; Water Works Association; American Public Health Association; Boston Society of Civil Engineers; and the Bay Head Yacht Club. Upon graduating from college, Warren worked as a junior assistant engineer, sanitary engineer, and acting chief engineer for the Illinois State Health Department for 13 years. During World War I he was a second lieutenant in the Sanitary Corps of the U.S. Army and served as defense co-ordinator for the Hacken-

sack Water Company during World War II. Since his retirement, Warren had been working in the field of electronic data processing. He had also lectured at New York University and other places on interior water supply systems, cross connections and related subjects. He participated in the drafting of local, county and state codes and regulations relating to sanitation. He played a major role in the development of a procedure standard for the protection of water systems within buildings from back-siphonage, as adopted in 1942 by the American Standards Council; his procedure is almost universally referred to in plumbing codes today. Surviving besides his wife are two sons, William W. Cowles of Media, Pa., and Warren W. Cowles of Ridgewood, and three grandchildren. Imogene wrote to Al Sampson: "I appreciated so much the beautiful silk card you sent. I mean to frame it, and to keep it as a symbol of the great understanding and the faith that has been given to us by the many people who loved and respected Warren. I am glad that we made the great effort which we had to make last spring to get from our son's commencement at Yale to the 1915 cocktail party in Cambridge, and to the beautiful dinner which was your plan also. I am glad that Warren did not miss this because he cared so much for these associations. His death came suddenly, at the end of a long illness and surgery. I know that you can understand the difficult adjustment that I am trying to face. Our two boys also have felt the loneliness that for me, at any rate, will go on. Thank you again for the picture which I turn to often." The loss of these fine old friends and classmates is sad and hard to take. We feel deeply and sympathetically for their families and send them our sincere wishes for good cheer. In our life time we can have only one 1915 50th Reunion. How about it? —**Azel W. Mack**, Secretary, 100 Memorial Drive, Cambridge 42, Mass.

## '16

We are very sorry indeed to report that **Bob Wilson** died in Geneva, Switzerland, on September 1. He and Pearl had just completed a two-months cruise and motor vacation in the British Isles and on the continent, and arrived in Geneva, Sunday, September 30 to attend the Atoms for Peace Conference. Early that evening Bob attended two affairs, was back by 8:00 o'clock, but was stricken with a cerebral hemorrhage some time between 10:15 P.M. and 6:30 the next morning. The funeral service was held in the chapel of his beloved College of Wooster in Wooster, Ohio, on September 5. As we all know, Bob had a most distinguished career. Only last February 1, he resigned as one of the five Atomic Energy Commissioners. He was appointed to this post by President Eisenhower, served four years under three presidents, and made highly important contributions to the peaceful uses of atomic energy and private ownership of atomic power facilities.

He was board chairman and chief executive officer of the Standard Oil Company (Indiana) from 1945 until his retirement in 1958. During that period he was a director of the Chase Manhattan Bank of New York and of the First National Bank of Chicago. As stated in the Boston Herald of September 2: "During World War I he was a major in the chemical warfare service, directing research on gas mask absorbence and protective clothing. After the war he served as associate professor of chemical engineering and director of the Research Laboratory of Applied Chemistry at M.I.T. Wilson was a life member of the M.I.T. Corporation and a trustee of Wooster College and of the Carnegie Institution of Washington. He was a member of the National Academy of Sciences, the American Philosophical Society, the Newcomen Society of England, and a fellow of the Royal Society of Arts (England), in addition to being a member of many professional societies." Added to all this, he had received many honorary degrees from colleges and universities; in June 1963 he was awarded his 18th honorary doctorate, this one from Geneva College, Beaver Falls, Pa., where his father was teaching when Bob was born! We have other items to report from Bob and Pearl but these we will hold until a later issue.

We hated to see it go, but our 48th Reunion passed into history June 12-14, climaxed by a clam bake lobster shore dinner on the waterfront at Chatham on the Cape, where, in the words of the Alger books of old: "they did ample justice to the bountiful repast set before them"! Those in attendance numbered 40 and included the Phil Bakers, the Steve Brophys, Will Brown, Jack Burbank, the Jap Carrs, Howard Claussen and son Fred, Dina Coleman, the Bob Crosbys, the Theron Curtises, Harold Dodge, Bert Ellis, Jim Evans, the Ralph Fletchers, the Cy Guethings, Maury Holland, the Emory Kemps, the Charlie Lawrances, the Irv McDaniels, our hard-working honorary member Bob O'Brien, Izzy Richmond, the Henry Shepards, the Francis Sterns, Peb Stone, the Vert Youngs, and the Bob Wilsons. Greatest distances were represented this year by the McDaniels from Newport Beach, Calif., the Youngs from Bogalusa, La., the Kemps from Florida, Dina Coleman from Kentucky, the Bakers and Guethings from Michigan, and Will Brown from Ohio. Last minute cancellations came from the Ullians, the Websters, the Fairfield, Bill Drummey, and Hovey Freeman. Those in attendance Alumni Day June 15 in Cambridge included Phil Baker, Will Brown, Van Bush, John Hunneman, the Ralph Fletchers, the Irv McDaniels, Don Webster, and the Bob Wilsons.

For the 48th, as usual, the facilities, the atmosphere, the meals, the rocking chairs, and the golf course at Chatham Bars Inn were all of the best. The weather was good (oh, a shower or two on Saturday), the salt breezes refreshing, the conversation just what you'd expect at a 48th reunion, the Cottage G gatherings with refreshments (or not) just like old times, and the sharing of the Inn with the



Class of 1919 on its 45th, an enjoyable experience. (We were personally delighted to see colleague retirees from Bell Labs—Pat Paterson and Pete Blye '19, Sec.)

**Bob O'Brien** has helped us in listing some of the "Items of Interest" for the reunion—there are so many things happening in those two or three days it is hard for one person to make an adequate record. Once again we had our headquarters in good old Cottage G, over whose outdoors portal was hung **Jim Evans'** super-colossal banner of digits 1.9.1.6. This is where anyone and everyone went when he or they didn't know what else to do, and where conversation was at its best. Sitting on the patio in lawn chairs and looking out across the water toward England didn't do any harm to the poetic content of what was said. Now for a few items: **Maury Holland** dubbing Jim Evans as "House Mother Evans" for his care about reunion things; clear blue sky for the shore dinner on Sunday; **Cy Guething**, and something about horseshoe crabs, a morning walk, and the fisherman from New Bedford; golfers: Fletcher, Stern, Stone, Crosby, Dodge, and was-it Wilson and Stern to Eastward Ho; red winged black-birds hovering over the Chatham second hole tee and chattering to golfers for disturbing their brood or something; tennis players: Carr, Richmond, O'Brien, and Arklay Richards, '19; swimmers: **Izzy Richmond**, with his two-seater plane flying Cy Guething to Martha's Vineyard or Nantucket just for a swim on an island; bridge foursomes like Stone, Wilson, Stern and Gladys Stern; **Vert** and **Sylvia Young** arriving Saturday in Ralph's plane after a meeting at Trinity College in Hartford; colorful, real colorful, get-ups worn by **Ralph Fletcher** and **Phil Baker**; the surprise and pleasure with which **Peb Stone** and **Harold Dodge** discovered **Dina Coleman** in the Northeast Airlines dining room in Kennedy Airport on the way to Cape Cod; the substantial element of charm contributed by the ladies at the reunion; **Charlie Lawrance** with his cane but looking more hale and hearty and thinking well beyond the 50th; **Maury Holland** finding so much in common with many classmates as he unearths past near-associations in a number of his high level research ventures; **Steve** and **Jess Brophy** and their enthusiasm for discovered little gift shops on the Cape and their success in getting just what was-needed for a "Cape Cod" setting for a social the next week; the pleasure of seeing Pearl Wilson so well recovered after her serious accident of two years ago; **Will Brown's** getting younger reunion-by-reunion to the degree that this time a local shopkeeper guessed this was his "30th or 35th" reunion; the bobwhites calling and calling just like they did some shall-we-say 68 or 70 years ago; seeing and talking with our two favorite brilliant travel-authors, **Sylvia Young** and **Irv McDaniel** from Bogalusa and California; someone urging **Ralph Fletcher** to try skiing in the Sandia Mountains, Albuquerque, N.M., where a new ski lift has just been completed on the east slope; **Francis Stern's** exciting explanation of

the Junior Achievement program (he now chairs the Board from Virginia to Canada), and its effectiveness as the seed bed of the American free enterprise system; after some urging, **Bob Wilson's** comprehensive explanation of the highlights of atomic energy, its development, its control, its remarkable peaceful uses in industry and medicine, and its potential as a primary source of power looking into the next century. A highlight of the reunion was **Irv McDaniel's** delightful presentation of slides from England, Austria, Greece, and Bulgaria with comments of the kind our readers have looked forward to month by month for the last two years or so. Some of his stories and slides were close to fantastic, giving us first hand a bit of knowledge of what really goes on inside some of the other countries. (Your secretary and family were particularly honored to have Irv and Kay as guests near the end of their journey cross country to the World's Fair and the Reunion.) The big event was the banquet on Saturday night, made perfect by Ralph's customary offering of a delicious chosen-year wine. His prexy talk was of the usual top quality, punctuated, of course, with alphabet phrases, and loaded with references to what makes a class a good one. **Steve Brophy** too, portrayed with the magic of his well-chosen words, the greatness of the Class of 1916 and the importance that each of its members contributes. And here's one more, a concluding item perhaps: **Izzy Richmond** and his lively passenger, **Jim Evans**, flying from Chatham to Teterboro, N.J., and **Jim** then at home in Fair Lawn calling **Izzy** two hours later to make sure the return to Boston was a safe one. Now, all we have to do is look forward to the 49th next June!

**Rudi Gruber**, writing early in June while on tour in Greece, asked to be remembered "to some of my good '16 classmates especially the **Fletchers**, **Leaches**, **Wilsons**, **Websters**, **Brophys** and of course **Jimmy Evans**; also to safarists **Mendelson** and **Binger**. I am en tour through Europe by "Peugeot" purchased in Paris. We drove to Nice, then to Genoa, Portofino, Florence, Rome and Naples and then to Brindisi where we left the car during our Greek tour." . . . **Joe Barker** is one of the wardens of Trinity Parish (downtown Manhattan) and accordingly the **Barkers** accompanied the Rector and Mrs. **Heuss** and the other warden and his wife to the reconsecration of St. Mary-le-Bow in London on June 11. This was "quite a celebration" with the Archbishops of Canterbury and York, and in the presence of the Queen Mother when the Lord Bishop of London re-consecrated the church and our Rector preached the sermon." Some two weeks of parties were scheduled. When Trinity Parish was founded in 1697 the King and Queen of England gave the endowment—"the land from Rector Street to Christopher Street from Broadway to the Hudson River. "So" **Joe** notes, "you can see how close the relationship has been for over 270-odd years. When St. Mary-le-Bow was completely razed in the W.W. II blitz, Trinity initiated her rebuilding fund with a sizable gift. The church is now com-

pletely rebuilt and debt free."

In his letter of May, **Herb Gilkey** writes: "the 47th Reunion photo shows as youthful and robust a looking bunch of 'oldsters' as one could hope to see assembled, and it makes me more regretful than ever that over the years my limited travels have so rarely encountered '16ers." He still spends time helping to steer his old Department of Engineering Mechanics in Iowa State University, but says: "Briefly, our news, or the lack of it, may be summarized as follows: Just to be queer, we (a) still don't play golf, (b) don't own a car—never did, and (c) haven't traveled to foreign parts (since World War I). But in spite of such abnormalities, (a) we are in good health, (b) we do have five thoroughly satisfying grandchildren (ages 8 to 17 resident in Cleveland), and (c) the class notes are perused fully and are thoroughly enjoyed." . . . **George Petit**, on a copy of a letter to him from E. G. Short, general manager of the Chicago White Sox, gave **Jim Evans** one reason why he couldn't attend the reunion: "I am statistical advisor to the Chicago White Sox of the American Baseball League and am awaiting a call to Chicago and may have to travel with the Club (at 72!). But Casey Stengel is 75! Give my love to each of the best aggregation in the universe, 1916!" Then follows a bunch of initials! **George**, as most '16ers know, has a system of his own, a successful one, for predicting events using the statistical behavior of appropriately chosen past partial averages. And his system seems to have a high probability of success. Nice going, **George**, judging by how the White Sox were doing at the end of August!

In 1952, **Steve Brophy** headed up the project of getting out the vote, and this year, as President of the American Heritage Foundation, he is at it again. On August 11 at the White House, **Steve** spoke to some 200 corporate and other executives from all over the country in launching the 1964 Register, Know the Issues Campaign of the Foundation. The President spoke not once but twice, interrupting **Steve's** remarks the second time to express his enthusiasm for what is being done. Secretaries **Rusk** and **MacNamara** spoke, as did the Chairmen of the Republican and Democratic National Committees. **Steve** notes: "Afterwards we had refreshments at the expense of the taxpayers and to the accompaniment of the Marine Band. Ah well, as **Irv** would say, 'Meet me dear at the White House!'" Good work, **Steve**! You certainly get into worthwhile things!

No column of ours seems quite complete without word from the **Irv McDaniel's**, and this time we have something new to offer. To would-be travelers, we have two pages prepared by **Irv**, copies of which we can furnish on request. The first gives the **McDaniel's** reading course, one that should be helpful in one's preparation for any trip to foreign lands. The second, on food, starts off by saying: "Katherine and I are not really gourmets, we just think we are. But we have been very fortunate in sampling food all over the world, and here is a list of our favorite places, and dishes, and in order of



priority." As a matter of interest, let's just give the first four items in his list of 20: "(1) The Old Poodle Dog, San Francisco; now defunct and only a memory. (2) Perinos, Los Angeles; Beef Stroganoff. (3) Devos, 7 Rue de la Coupe, Mons, Belgium; caneton aux griottes (duck with cherries), herb soup, moulded fish, what sauces, and ice cream made with Grand Marnier. (4) Meson de Candido, Segovia, Spain; gespatcho and baby suckling pig." As Irv says: "Everyone likes to tell about the books they have read or places they heave eaten. Think of the stories you could get from the Fletchers, Patens, Brophys, Vertrees Youngs, etc. How I would have appreciated such information five years ago—I had to do it the hard way."

And we have a raft of information from Jim Evans as a result of his well-known and highly-approved propensity for keeping in touch. First let us quote from a card from Ralph to Jim from Canada: "Still fishing. Cast all day—big river, fast water—faster fish. Half hour to land 12 to 15 pound fresh run Atlantic salmon." And **Francis Stern** forwarded a story to Jim about the two guys—wait, we'll save that one and make Verifax copies. **Art Caldwell** wrote that the Irv McDaniels never cease to amaze him. "The countries they have seen and the pictures they have taken go far beyond the experience of any other couple I have ever heard of. They 'should write a book' and illustrate it!" That must be something like the 33rd or 43rd suggestion we have received that Irv and Kay should publish their experiences. The **Caldwells** expected to be at the Sky Top Club in the Poconos from mid-September to mid-October. Jim reports several letters of regret regarding attendance at the reunion. **Jeff Gfroerer** points out his somewhat different situation as compared with that of most '16ers, with two sons aged 18 and 23 home at that time. He notes "trying to save one of the biggest elms in Western Massachusetts (girth 15 feet, 3 inches)", and "also have drilled an artesian well 145 feet—it was terribly dry last summer, and we couldn't use both our baths." **Elizabeth Pattee** had an unavoidable change in plans—looks forward to next year. **Bill Drummey** noted that he was "semi-retired" but that this was "the best joke of 1964"! **Rudi Gruber**, a retired vice-president of Merck, sent a card "Der Luisenplatz im Darmstadt" painted by William Merck in 1820. And Jim notes that **Larry de Labarre** has not been well, and since June has been in Walsh House, 420 East 59th Street in New York.

The Cy Guethings spent a good part of the early summer in Pointe au Baril, Ontario, where the food, fishing, and fresh air are of a quality that beckons them back year after year. They were back home early in August and presumably had, among other things, the finest samples of super-deluxe string beans and tomatoes fresh from their own garden. Late summer was spent at the familiar-to-1916 Oyster Harbors Club in Oysterville, Cape Cod, where Cy and your secretary have thrilled to the whistley "bob-white" calls on early-morning reunion walks. While there, Cy and Gyps saw the

**Don Websters**, had lunch with the **Jack Burbanks**, and Cy fished with Jack in his nearly-private stocked pond. . . . We seem to get a goodly collection of pictures of '16ers each year to show at reunions, and have two already for next June. The first is one of **Joel Connolly** in Volume 12, No. 6 of Student Review, published by the U.S. Information Service in Taipei, Taiwan. On page 38 is shown a new waterworks in Formosa with Joel referred to as: "U.S.A.I.D./China official supervises the maintenance of a new water system on Taiwan." The other picture is on the front page of the July 5 issue of the Bridgeport, Conn., Sunday Post. Three pictures relate to the 1964 Barnum Festival Parade on the Fourth of July, and the third one shows who-do-you-think? The caption describes him: "Making like an Oriental 'Beatle' at the right is **Richard Berger**." Dick has been doing this for years and somehow he usually makes the front page; "other pictures inside." He continues as president of Cancer Prevention, Inc., and addressed a January meeting of the Great Neck School of Lordship P.T.A. on "Why Cancer—And Its Prevention."

**LOST!** On July 13, a grandmother's gold bracelet, with charms giving names and birth dates of 15 grandchildren, also a M.I.T. seal. This was lost by **Ruth Kemp** as she and **Emory** were returning to Florida, lost they believe somewhere between Wellfleet, Cape Cod, and the Dutch Village in Wilmington, Del., or possibly at the first gas station at the northern end of the Garden State Parkway in New Jersey. We trust that, with a little luck, this notice will provide chances of considerably more than 1 in 711 of recovering this bracelet.

**Charlie Lawrance** sends something for our records, "a bit of 1916 treasure, that Lois unearthed today while cleaning up our attic. She had dug through as far as the eaves and came up with this." It is a set of pages 3, 4, 5 and 6 of the Boston Evening Transcript April 29, 1916, and includes the page headlines: "1,200 Jubilant Tech Men in a Show Financed at \$500,000 by Old Grads", and "As Tech Moves Into Tech-dom: With a Merry Pageant of Rejoicings." Also is given "A New Portrait of President MacLaurin" who signed our diplomas! Remember? . . . The **Bob Crosbys** had a few weeks in Maine and Canada this summer and we understand Bob enjoyed better-than-usual fishing during "a splendid tho' cold vacation." . . . **Peb** and **Dolly Stone** spent the good summer months on their little old Little Beaver Island in the upper reaches of Lake Winnepesaukee. As reported in July: "Have been busy as a bird-dog making things work but it's fun," and in August: "The boats are running well in general and the projects keep well ahead of schedule (let me tell you of my new and improved chopping block!)." . . . And the **Harold Mills** took their customary two-months-or-more automobile trip to California to see their two daughters and especially a new granddaughter, and also to browse around places in Utah; August saw them visiting old haunts in New England. . . . In August, the **Francis Sterns** had a three

weeks' trip to California to visit children and grandchildren, to see Tahoe and Virginia City, and to test fish behavior in Lassen National Park (Grandpa, that is!).

While in San Antonio early in June, your secretary had a nice telephone visit with **Bill Leach** in Austin, but failed to reach **Kem Dean** in Houston. A telephone call en route in Dallas picked up **Mark Lemmon's** best wishes to 1916 and the reiteration of his intent to be at the 50th. Later information indicated that Kem and his wife were on an extensive trip. Leaving Houston on May 30 they had a few days "visiting brothers, etc." in Boston and New York, then flew to Rome, went to Florence, Milan, Lucerne, Zurich, Paris and London, and drove around England for five days. Their return jet left Amsterdam at 1:30 P.M. and after one stop in Montreal reached Houston at 6:30 P.M. . . . **Ed Williams**, back from Daytona Beach, commented in June from North Falmouth: "I surely would have enjoyed being among those present at the reunion. Now that the schools are out the summer residents are arriving and the visitors starting to come in and for the next three months, the Cape will be jumping." . . . **Willard Brown**, one of the several successful colored-slide producers at the reunion, tells of one of the July, 1964, pleasures of being a father. He writes: "Just back from Midland, Mich., watching my daughter win the Midland Country Club President's Cup! Five gruelling days of match play. She really isn't an expert golfer but evidently can rise to the occasion. In the finals match, which she won 3 and 2, she made the lowest score she has ever made in her whole life!! Very pleasant day for Father!" . . . We close with heavy appreciation for the many letters and clippings received to help fill the class column. Stories and bits of information from several others, including **Berthoud Boulton**, **Jap Carr**, **Charlie Glann**, **Maury Holland**, **Arthur Wells**, and **Vert Young** are being held over until the next issue. Once more we say—help keep the little old column full and interesting by writing a little but writing often.—**Harold F. Dodge**, Secretary, 96 Briarcliff Road, Mountain Lakes, N.J.

# '17

Have you sent in the reply to your class questionnaire? Before launching into the very interesting questionnaire replies received to date, there are a number of notes that have been waiting for this issue. Most of the "regulars" attended the Alumni Day exercises in June: the **Ray Blanchards**, **Ray Brooks**, **Dennens**, **Dunnings**, **Hunters**, **Stanley Lanes**, **Lunns**, **McNeills**, **Ray Stevens**, **Strouts**, **A. E. Tuttle**, **Ken Bell**, **Brick Dunham**, **Heine Gartner**, and **R. W. Drobisch**, who has not appeared at a June reunion for some time. The seminars, court luncheon, cocktail hour, dinner, and evening concert by **Arthur Fiedler** and the Boston Pops Orchestra followed.

Last spring the secretary and wife dropped in on Dave Waite at his interestingly landscaped home at Quonchontaug, R.I. Dave lives at his shore resort home the year round. He has taken on the job of teaching science at the local high school and finds it stimulating. . . . The Ray Stevens and John Lunn's attended a retirement dinner honoring Jack Wood at the Faculty Club on May 18. . . . Ray and Ruth Gauger appeared unannounced in the Boston Area for professional conferences with Boston architects. Ray has his own office, with some 20 architects, draftsmen and engineers on his staff serving the Twin Cities and the Minnesota-Wisconsin area. His younger son is finishing his fifth year of preparation for eventual take-over of the Gauger activities. His older son is an engineer. . . . Bob Erb announces that as of May 13 he retired as president of the Melville Shoe Corporation. He continues as a member of the board of directors and as chairman of the finance committee as well as chairman of the board of the manufacturing divisions—the J. F. McElwain Company and the Blue Ridge Shoe Company. Bob says: "Pat and I will continue to live in New Canaan, Conn. (Greenley Road), but hope to spend considerably more time at our summer place on Governor's Island, Lake Winnepesaukee, N.H. Perhaps now that I have retired, I shall be a more frequent attendant at the Class of '17 monthly luncheons in New York City." . . . Stanley M. Lane was recently re-elected president of the New England Baptist Hospital. . . . Earl C. Lewis retired from the Raytheon Company as senior industrial engineer on July 1, 1963, but claims not to have had an opportunity to relax until this year.

R. K. Robinson, of Ashtabula, Ohio, died June 21 at a rest home following a prolonged illness. He was 71 years of age. He was a graduate of Ohio Wesleyan and attended M.I.T. in 1914-1917 in Course I. Russell was vice-president of M. C. Robinson and Company. He joined the company with his father in 1920. He established the first ready-mixed concrete plant in Northeastern Ohio in 1928. Prior to 1940 he was in partnership with his father. He was sole owner of the firm from 1954 to 1957, when he was joined by his sons in its operation. He was a veteran of World War I, active in the Y.M.C.A. and other civic affairs.

Cornelius Coakley has written a most interesting commentary on his career since pre-M.I.T. days in answer to the class questionnaire. It is hoped that others may give as careful thought to their replies. As "Coak" indicated in his letter to the secretary, some of his comments may be applicable to those starting out on their careers. The following is quoted: "I was raised in a small town on Long Island and engaged in all high school athletics; good at all, star at none. It was here that I met the gal I was to marry. She was also interested in athletics. My uncle, for whom I was named, was a leading nose and throat specialist in New York and earnestly wanted me to study medicine and take over his practice (he had no children). I did not like medicine and point blank refused to study medicine. This was a sad

blow to him and undoubtedly cost me 'millions' assuming I had become a doctor and made the grade. However, when he found out I was firm and wanted to be an engineer, he set the wheels in motion for me to attend the best engineering school there was. It was on this basis that I went to M.I.T. This illustrated how an older established person can help a youngster by assisting him to select a school that is outstanding in the chosen field. My engineering selection turned to chemical engineering. This was a brand new field in 1917. An interesting point is my selection of the company I decided to work for. I had the usual pre-employment interviews. After listening to these, I decided that I would go with the interviewer who appeared most capable and personable—not the one who offered the most money or represented the largest company. F. W. Barker, M.I.T. '12, was my choice. Barker was a remarkable chap who understood people and how to develop them. I shall never regret my choice.

"World War I and the development of the chemical industry put me in business for life. During war times the subordinates knew as much about the business as their bosses, and it was a remarkably co-operative effort. I used every bit of my M.I.T. training during my career. I worked in chemical research, operations, maintenance, power, engineering and construction. I then went on to management; first engineering and then overall plant operations, and finally into the New York office as director of operations for the National Aniline Division of Allied Chemical and Dye Corporation, and retired in 1961. Early in my career, I decided that I would do my job as I saw it should be done and let the chips fall where they might. With my makeup, I would do the same thing again. However, in the light of what is now hindsight, I think I could ride over several rough spots a little more diplomatically. I probably would have advanced a little further; however, I have no regrets for the course of action I took. I think the greatest factor in any one's development is his relation with other people. Nothing was ever taught me in the field of human relations. Everything I got, I got from the school of hard knocks. It is not what you can do yourself that really adds up, but how much you can guide and direct others to accomplish co-operatively with their contemporaries and co-workers.

"Economics is today—or seems to me to be—the basic long range problem of our time. There is nothing that I was ever taught at home or at school that seems part of today's economy. Today you own nothing, borrow all you can, work as little as you can, expect pensions, Social Security, welfare, or something or someone to take care of the future. All this is tied in with taxes and the depreciated value of the dollar. When we got out of school, there were no pensions, Social Security, or other fringe benefits. It was up to each of us to provide for our own future by savings, insurance, etc. I think it really is the soundest possible economic basis to work on. I went a long way to develop this security. Then, with the changing philoso-

phy of the New Deal, came Social Security, pensions, and other welfare items. While the dollar has sadly depreciated, I have happened by luck to be in what you might call double security—at least so far. There is no such luck for the current generation. How does all this add up? Life has been good to me. I would do the whole general pattern over again. I would like to have been more of an extrovert, however, starting with more and broader contacts at M.I.T., and following these in business life. I still would stick to the philosophy of doing my job well and letting the chips fall as they will. I am not opposed to psychological testing, but believe it should be used only as a helpful tool in personal appraisal in conjunction with other significant factors. I do not subscribe to the philosophy that anyone who can do, or direct one job well can do or direct any job well. There may be merit to this position, but I am of the old school and believe that the real leader is one, who by experience, training, and know-how can aid and direct his subordinates and associates in those rough spots where help is needed. My field has been operations, manufacturing and development and some of my comments do not fully apply in the field of pure or exploratory research. It has been, and is, a good world. Let us strive to stabilize our economy and obtain peaceful co-existence of conflicting nations together with understanding. I consider an ultimate goal to the world's current problems to be a uniform standard of living throughout the world."

Another reply is from Warren Tapley of West Falmouth, Mass. His answers follow the questionnaire outline: "Experiences in life: 'Happiness, sadness, hard times, good times, enjoyments, frustrations, sickness, health. Accomplishments: To have lived happily together for nearly 50 years; to have a devoted and attentive daughter whose husband and three fine grandchildren are a blessing to us; to have been able to give my family some of the luxuries, and all of the necessities; to have arrived at the age of 71 years with all my faculties and in good health. Disappointments: I must have had them, and they must have been big ones at the time; but now, I can't remember them. Capitalize on things learned at M.I.T.: Only to the extent that I believe that I learned to think. No capitalization of any special subject or learning at M.I.T. What would be done differently: If in doing the job over again, the same happiness and health could be accomplished in the same manner as the first try, why change?"

The following from Bill Neuberger: "Experiences: diversified. Accomplishments: Considerable happiness. Disappointments: many. Capitalizing on instruction at M.I.T.: Eventually to think. Would do differently: nothing. This really boils it down. Sticking things out has been my greatest forte. About the best thing I have done is to have given any material wealth to my wife and my daughter and son. I guess that I have to thank our tax regulations for this; I don't think I would have been so generous otherwise." . . . Alan Sullivan's reply is brief: "I have been pretty easily satisfied and as for Mr. Sloan's a,b,c and d, I have



managed to eat well and sleep comfortably. As for "e", I would try to retire earlier if it is much more fun than working."

Colonel Max J. Mackler of Tampa, Fla., sends the following: "Experiences: World War I, private to first lieutenant, May, 1918, to October, 1919; port of embarkation, Newport News, Va. World War II, major to colonel, April, 1942, to August, 1946. Campaigns in Northern France, Rhineland and Ardennes. Awarded Croix de Guerre with Silver Gilt Star by French Army, and Presidential Unit Citation by President of the U.S.A. Accomplishments: Completed survey of the City of Tampa, Fla.; organized, planned and directed Slum Clearance Project for Tampa which resulted in the construction and development of 1,482 dwelling units for civilians, and a like number of slum dwellings demolished. Erected 300 dwelling units for military personnel—approximate cost \$6 million. Member of planning committees of the following organizations that built and put into operation the following projects: Clary Fry Negro Hospital, Tampa; Girl Scout Camp for Hillsborough County; Temple Schaarai Zedek Temple, Tampa (Served as President and member of the Board since 1925); American Legion Crippled Children's Hospital, St. Petersburg; Harry-Ann Memorial Crippled Children's Hospital, Unatilla, Fla.; Light-house for the Blind, Tampa; first President, Gulf Ridge Boy Scout Council (awarded silver beaver); life member and fellow of the American Public Health Association; served on the board of Tampa Urban League since 1928 and as president 1962-1964; past president and board member United Cerebral Palsy, Tampa; member of Florida Crippled Children's Commission for eight years; member Rotary Club of Tampa. Disappointments: That both World Wars I and II failed in the establishment of world wide peace and good will on earth and to all mankind. Capitalizing on M.I.T. Instruction: Applied principals and knowledge acquired at M.I.T. in sanitary sciences and Public Health. Would do differently: Complete courses and qualify for a Ph.D. degree at M.I.T." . . . The following may be of interest to golfers: Sandy and his minister had played golf every Saturday for 20 years, and Sandy always won. "Don't worry, Reverend," he consoled the good man, "someday you will have the pleasure of burying me." "Aye", replied the discouraged minister, "but it'll still be your hole."—**W. I. McNeill**, Secretary, 107 Wood Pond Road, West Hartford, Conn. 06107; **C. D. Proctor**, Assistant Secretary, P.O. Box 336, Lincoln Park, N.J. 07035.

## '18

Ever since Charles Darwin deprived us of a certain confused pride of ancestry, any mounting suspicions of our really having come down out of the trees have been dulled by loyalties to things like a college. Thus, companioned by evidences of having achieved something more than swinging out on a limb further than the

other anthropoids, the following attended Alumni Day last June: Eli Berman, Clarence C. Fuller, Alfred P. and Mrs. Grossman, Alan F. Howard, Julian C. and Mrs. Howe, John W. Kilduff, Edwin F. and Mrs. Rossman, Max and Mrs. Seltzer, Carlton E. Tucker, Saxton W. and Mrs. Fletcher. Among the things for which we can take pride in ancestry is the invention of writing. As a matter of fact, one of the reasons the Pilgrim Fathers beat the Indians is because they could send messages in writing. In a less defensive spirit, a gentle soul named **Max Seltzer** postcarded me last summer: "We visited Israel and were tremendously impressed with its development since our earlier trip nine years ago. We helped to dedicate the Karl Taylor Compton School of Chemistry. It is a magnificent building located on beautiful Mt. Carmel. Mrs. Compton was with us." She was also in Jaffrey this summer where the Magouns saw her on several occasions. The last of July we visited **Sax Fletcher** on his farm in Greenfield, N.H., where his 11 grandchildren love climbing back into the trees and his large herd of dairy cattle produce milk on which he loses money at 11 cents a quart. Remembering that our own farming uncle got five cents a quart for milk in 1910, it is easy to conclude that a comparable present price would be about 20 cents. Sax could make a handsome profit on that. We deplored the morals of the present college generation and went out to the vegetable garden for a renewal of faith in humanity. He showed me the excellence of his garden with some pride until I commented on a carelessly set woodchuck trap. He insisted it would still be effective. Perhaps the Greenfield woodchucks have more trusting and unruffled minds than the Jaffrey variety, who would certainly look upon the obviousness of that trap setting with a stomach churning horror.

A nice letter from **John Poteat** came as the answer to a class secretary's silent prayers: "I presume that the plan proposed at our 45th Reunion, namely, that we have our next reunion in 1965, will be activated. Tentative plans for the summer of 1965 are in the making for the Poteat household, and if there is to be a reunion we will wish to include it in our plans." (There surely will be a reunion on Cape Cod and at the Wianno Club at Osterville as in 1963.) "To stimulate correspondence among the members of an alumni group is a thankless and never ending task. That's why, each time I read *The Review*, I feel constrained to send you a note. Letters from classmates are probably like a letter from home when one is on an extended trip, such as the one from which we have just returned. At the moment I am engaged in the almost endless task of sorting, identifying and cataloging the 1,200 or so pictures I took. A month on the Iberian peninsula, 10 days in Southern France and on the Riviera, another 10 days in Italy and also in Greece as we worked our way by car up through the Italian Lake country, through Switzerland and the Romantic Road in Germany, culminating with a month in Britain. It gave us a historic, scenic and holiday experience that will live with us from now on. We look back

on the dividends that came wholly unplanned. For example, we blew into Rothenburg, Germany, on the very day they were celebrating, with theater and parade, their deliverance from despoliation during the 30 Years' War. We didn't know it was going on and yet 5,000 people had crowded into that small town from all over Europe to witness it! In Ludlow, England, we got into the old castle grounds just as a professional troupe was rehearsing "The Merchant of Venice" for their Shakespeare festival to come. So for two hours we sat on the door sill of a ruined hall thrilled by what we were seeing. I cannot begin to relate the names of and circumstances under which we ran into friends and acquaintances. In hotels, on buses, at historic sites—we never knew when they would turn up. And on the ship returning, a couple from our own town of Tryon walked into the dining room as we kept up our amazing luck of meeting people we know, no matter where. When all is said and done, it was a fantastic, fabulous and altogether satisfying experience.

Courtesy of **Carlton Tucker**, and again because said ancestry invented printing, came a clipping from the Norway (Maine) Advertiser concerning **Ed** and **Mrs. Rossman**, who participated in a flag raising last July to dedicate the new pole on the Paris (Maine) village green. They pulled the halliards which hoisted the bunting while others offered prayer, sounded "to the colors" and did whatever else was appropriate in honoring a citizen.

Courtesy of the secretary of the Alumni Association. I have an accounting of our entire class. As of the information available on the first of June, there were 390 living, and 221 of us who have now joined their ancestors. Considering our approaching the three score year and ten mark, this is a brave showing. There will be no additions to the former list. To the latter must now be added **Francis P. Corbett**, who died on December 29, **Meredith F. Parker**, for whom I have no date, **Alan F. Howard** on August 2, and **Arthur A. Church** on October 24. The Winchester (Mass.) Weekly says: "Alan F. Howard of 22 Glen Road, and 'The Ledges' in Sunapee, N.H., President of Bemis Associates of Watertown and widely known in and around Winchester, died suddenly Sunday, August 2, on the golf course at Sunapee, N.H., of a heart attack. His twin brother Paul H. Howard, died a year ago last January, also of a heart attack and also in Sunapee. As a young man he worked for a time for Lever Brothers, but 44 years ago he joined the Bemis Associates, manufacturers of specialty adhesives, becoming president of the firm and being widely known to the trade. He was a member of William Parkman Lodge of Masons, and was a long time member, past vice-president and member of the board of directors of the Winchester Country Club. During World War I he served as a naval aviator. Flags on the Common and town buildings were displayed at half-staff in his honor. He married Emma J. Banks of Reading in 1918. Besides his wife, he leaves two daughters, three sons, and 22 grandchildren."—**F. Alexander Magoun**, Secretary, Jaffrey Center, N.H.



Class attendance at Alumni Day last June was not up to our usual number, no doubt because most of you are saving up for next year when we can combine Alumni Day activities with our class reunion. In case you didn't get my letter, our 45th will be held, starting June 11, at the Red Lion Inn, Stockbridge, and promises to be the best yet. For the first time, wives will be welcomed. (That goes for husbands too, Flossie.) Among those present on Alumni Day were Norrie and Betty Abbott, Henry and Mrs. Hills, Ed and Mrs. Ryer, Bat and Irene Thresher, Bill Dewey, Dave Fiske, Witold Kosicki, Pete Lavedan, Frank Badger, El Wason, Elliot and Mrs. Perkins, Dick and Mrs. Gee, Bob Patterson, and your secretary and his Amy. . . . **Al Wason** and Mrs. Wason were touring Europe, as were **Perk** and **Mina Bugbee**. **Al** and **Betty Burke** were in San Diego visiting their son and his family. **Al**, by the way, appeared prominently on television this summer as communications chief at the professional and amateur national tennis tournaments at Longwood Cricket Club. Without **Al**, Longwood would collapse.

Not wishing to wait until June, a half dozen of our classmates had a gala reunion at Vinalhaven, Maine, on two yachts rafted together, according to a postcard announcement signed by **Dick Gee**, **Roger McNear**, **Eddie Ryer**, **Jack Kellar**, '22, **Mich Bawden**, '21, and **Jim Gibson**. What a grand time those old sea dogs have, cruising down that lovely coast every summer! **Jim** was at his summer place in Bucks Harbor, and, I imagine, the gang missed **Buck Clark** by a few days, as **Buck** spends a good part of the summer at his three-cottage estate there.

A welcome letter from **Ming Pai** tells of his retirement from Ebasco International Corporation in New York and his new association with the U.S. Coast Guard as an electrical engineer; his office is Room 5002, 1300 E. Street, N.W., Washington, D.C. We all hope that **Ming** and Mrs. **Pai** will be with us at reunion. . . . **Howard Mandell** has moved from New Bedford to East Freetown, Mass. . . . **Dr. Robert Aborn** has left Glenshaw, Pa., for Millington, N.J. . . . **John Bowman** is in Buffalo, N.Y., address 22 Penhurst Park. . . . **Andrew Johnson** is now in London W2, 123 Sussex Gardens. He was formerly of Providence, R.I. . . . **Carleton Proctor** has moved from Wakefield to Reading, Mass., 34 Lothrop Road. . . . "**Dolly**" **Gray** is another of the growing group that has headed south. He has gone from Wilton, Conn., to Sarasota—4425 Coco Ridge Circle. "Hello, Dolly," we would like to hear from you.

**Phil Brown's** retirement as vice-president and director of the Hartford Insurance Companies was announced on September 1. He had been with the Hartford for 44 years. . . . **Louis Harris** recently co-authored a book, "Introduction to Wave Mechanics," published by McGraw-Hill Book Company. . . . Regretfully reported is the death of **Fred Smyser**, last June at his home in Marblehead, Mass. . . . We were also sorry to hear of the

death of **Pete Ash's** wife, **Olive**, last spring. The entire class extends warm sympathy, **Pete**. . . . Reports on the famous Fighting 45th Reunion plans and prospective attendance will appear in subsequent issues. Watch for them! And make plans now to attend. This is one you will not want to miss.—**Harold Bugbee**, Secretary, 21 Everell Road, Winchester, Mass.

## '21

Greetings and welcome to our 44th year of these monthly sessions around the friendly fireside of the Class of '21. The principal event in 1921 history since the last issue of *The Review* was our participation in Alumni Day at Cambridge in June. A total of 51 members of the class, their wives and guests formed our contingent to partake of the usual excellent program, devoted this year to Technology's part in the new techno-medical alliance and aid to foot health. The morning registration period has developed into a welcoming session for old and newcomers to these miniature reunions. Tours, insofar as your secretary was concerned, involved an inspection of the entire Institute plant (in place of the advertised medical demonstrations), which we accomplished on foot. Result: Photographic evidence (and temporarily tired feet) to prove that, in comparison with today's educational, social, spiritual, housing and commercial facilities, the M.I.T. we attended was just a one-room schoolhouse. We are not sure that the tall buildings add to the beauty of the campus but they are certainly in consonance with the new skyscraper skyline of Boston and they are indeed different. Informal luncheon in the Great Court and the traditional address by our revered President **Jay Stratton**, '23, revealing his hopes and plans, was followed by **Dean Harrison's** intriguing panel session on "Servomechanisms in Living Systems." Next the social hour, originally conceived by the Class of '21, saw most of our group together again. Dinner in **Rockwell Cage** afforded a relaxing get-together and then we all went to **Kresge Auditorium** for another delightful special concert by **Arthur Fiedler** and the **Boston Pops**.

Among those present were: **John** and **Mrs. Barriger**, **Mich** and **Mrs. Bawden**, **Cac** and **Mrs. Clarke**, **Josh** and **Mrs. Crosby**, **Ed** and **Mrs. Delany**, **Chick** and **Mrs. Dubé**, **Fritz** and **Mrs. Ferdinand**, **Norm** and **Mrs. Ferguson**, **Harry** and **Mrs. Goodman**, **Bob Haskel**, **Irv Jakobson**, **Mel** and **Mrs. Jenney**, **Algot Johnson**, **Phil Johnson**, **Chick** and **Mrs. Kurth**, **Malcolm Kurth**, '49, **Al** and **Mrs. Lloyd**, **Ed** and **Mrs. MacDonald**, **Dick McKay**, **John Mattson**, **Don** and **Mrs. Morse**, **Phil Nelles** and **Kay Carleton**, **Herb Reinhard**, **Harry** and **Mrs. Rosenfield**, **Jay Rosenfield**, '51, **Ray** and **Mrs. St. Laurent**, **Steve** and **Mrs. Seamos**, **Bill Sherry**, **Ed** and **Mrs. Steffian**, **Bill** and **Mrs. Wald**, **Charlie Williams**. Missed and the subject of repeated inquiries were **Ed Farrand** and **Sumner Hayward**. **Chick** and **Laurie Kurth** reported that **Susan** is engaged. Incidentally, **Chick** wrote a most gracious note, welcoming all prospective

attendees in advance of Alumni Day. **Herb Reinhard** reported his son, the Reverend **Robert Reinhard**, is studying in Rome. We never did learn if that pundit in our midst managed to ask **John Barriger** what the railroads are going to do with all those feather beds.

Through **Maxine's** interest in the several art exhibits, we were privileged to meet **Luang Videt-Yontrakich**, '24, Educational Counselor of the Royal Thai Embassy in Washington, and his most interesting family. Thinking of **Saul Silverstein's** questions from Bangkok about the Siamese prince in our class, we made inquiries. For the record, it develops that the current king of Thai, then 11-year-old **Prince Ananda**, away at school in Switzerland, was called to the throne upon the abdication of his uncle, **King Prajadhipok**. The king is the son of our classmate, **Prince Songkla Mahidol**, who attended the School for Health Officers, conducted jointly by M.I.T. and Harvard, and received a Certificate in Public Health as of 1921. As a child, the present king lived in Cambridge with his parents until the family returned to what was then Siam. **Prince Songkla** served his country efficiently in medical work until his untimely death in the late twenties.

. . . **Roderick K. Eskew**, a chemical engineer with the U.S. Department of Agriculture, received the **Rohland A. Isker Award** for his contributions to food science and technology in the fields of food dehydration and juice processing, which have important applications to military rations. The award is made annually by **Research and Development Associates, Inc.**, of **Natick, Mass.**, dedicated to the promotion of research for the benefit of the armed forces, and was presented at formal ceremonies in Boston. **Rod** has been chief of the **Eastern Utilization Research and Development Division** since it was established in **Wyndmoor, Pa.**, in 1940. He and his staff have invented a number of food products and processes, including concentrates and powders made from the juice of apples, grapes and other fruits by the essence-recovery process for which they received the **Department of Agriculture's** highest honor, the **Distinguished Award**. Another development in which **Rod** has taken a leading part is the production of potato flakes. Some 60 million pounds of these flakes are now made annually. The **Institute of Food Technologists** presented **Rod** and the inventors of the process with its **Industrial Achievement Award**. Other food products under development include dehydrated fruits and vegetables made by an explosive-puffing process, which permits them to be cooked in a few minutes, and a vacuum process for making dried whole milk. Before joining the **Department of Agriculture**, **Rod** did research on rayon for the **Tubize Chatillon Corporation** and earlier he aided in developing Japan's rayon industry for the **Brown Company**. He also worked on plastics for **DuPont** and at the **Hercules Powder Company** nitrocellulose plant. **Rod** and **Mrs. Eskew** have three children, **Mrs. Richard Meyer** of **Lawrence, Kansas**, **Bruce** and **John**. They live with their sons at 636 East Willow Grove Avenue, **Glenside, Pa.**

A welcome letter from **Rod** says: "For

years, I have found myself turning first to the Class News section of The Review to find what friends and contemporaries are doing. I have been impressed with the volume and informativeness of 1921's notes and feel guilty that in some 40 years I have contributed nothing. This is by way of renewing touch before retirement and/or senility sets in. Since leaving Technology, I have lived in New Jersey, Georgia and Maine and have finally settled here, where I hope to stay until retirement. Since I am still blessed with good health, I plan to remain until forced to retire at 70, some three years hence. How could I do otherwise with a 12-year-old son? I can recommend these young 'hostages to fortune' as a means of keeping young. The boy has grown so fond of riding, showing and hunting his horse that even I have mounted again after a lapse of 30 years. Obviously, my activities are confined to quiet woods trails. Directing a team of about 50 in applying engineering principles to food process development has proven fascinating and rewarding work. It brings me in touch with many visitors from abroad and has entailed foreign travel on several occasions. I have been negligent about keeping in touch with classmates, hence would be all the more happy to hear from any who may be in the vicinity. My office telephone is CHestnut Hill 7-5800 and my home phone is TUrner 4-5868. Best regards." And thank you, Rod.

**Leon and Emma Lloyd** sent a message from Juneau, Alaska, including a beautiful colored photo of the two-to-three-mile wide Mendenhall Glacier, which is accessible by automobile road along its 17-mile length. Al writes: "This has been a wonderful trip. Scenery is terrific. We went by boat from Vancouver to Juneau and Skagway. You can take color pictures up here until 8 P.M. Read a newspaper on deck at 11:30 P.M. Best regards." For a man who said he was so busy in retirement that he didn't know how he had ever had time to work, we assume the Alaska trip was a rest period from retirement! . . . Numerous address changes have been received. **Paul H. Rutherford**, General Manager of the Delco Appliance Division of General Motors, gives his home address as 1600 East Avenue, Rochester, N.Y. Paul has been with Delco since 1926. . . . **Roy A. Wehe**, engineering consultant, has moved from San Francisco to 51 El Cerrito Avenue, San Mateo, Calif. . . . **Dr. Axel G. H. Andersen** reports he lives at 15 Westway Road, Wayland, Mass. . . . **Asher Z. Cohen** says his mail should be addressed to Apt. 1-A, 3505 Langrehr Road, Baltimore, Md. 21207. . . . **Edward W. Noyes** has returned from Pompano Beach, to his home on R.D. No. 2, Thompson, Pa. . . . **Franklin T. Flaherty** can be reached via P.O. Box 12, Lincoln Road, Lincoln, Mass. . . . **G. Howard LeFevre** makes his home at Apt. 1R, 20 Gloucester Street, Boston 02115. . . . **Ralph E. Ferdinand** writes that he has moved from Marshfield, Mass., to the Tides Motel, Box 215, South Chatham, Mass. Retirement, Fritz? . . . **John J. Healy, Jr.** announced his move from Clayton, Mo., to 1 Crescent Ave. in his favorite town of Scituate, Mass.

Is this retirement, Jack? . . . **Philip H. Hatch** has noted a change from Pelham Manor, N.Y., to 70 Gibson Street, North East, Pa. 16428. Does this mean retirement, Phil? . . . **Julius Gordon's** address has changed from Atlanta, Ga., to 16820 N. E. 8th Place, North Miami Beach 62, Fla. Also retirement, Julius? . . . New addresses have also been received for the following and will be furnished on request to your Secretary: **Herman Brookman**, Major General **Herbert B. Loper**, **Donald B. Lovis**, **Richard H. Morris**, **Clifton B. Morse**, **John A. Scarlett**, **Lemuel Pope**, **Admiral L. B. Richardson**.

**Edmund G. Farrand** wrote that he would be away from his home in Leesburg, Ga., for several months and would of necessity have to forego Alumni Day. A phone call to Leesburg to thank him for a wonderful gift was too late to reach him, but the Eubanks family were most helpful and cordial. As a result, Ed phoned us from Chicago and particularly sent his thanks to **Al Lloyd**. He expressed regrets to all at not being in Cambridge in June and said he planned to attend the September Alumni Officers' Conference and the Alumni Seminar and might also get to New York World's Fair. Writing from the University Club of Chicago, Ed now advises that he and Helen had gone to Chicago May 23, so she could be with her former doctor for an operation which was performed highly successfully. We are glad to know that all has gone well and hope that by this time complete recovery has entirely erased the experience. Since we have had to forego the September Institute conference, we hope to see the Ferrands here for a trip to the fair.

**Franklin T. Flaherty** earns a place in our secretarial Hall of Fame for a delightful letter of praise and news which says: "My thanks to you for the n<sup>10</sup> ergs you must expend monthly on writing the Class News. We, that's Augusta and I, do thoroughly enjoy reading them. Some of your other beholden readers might be interested in a change of pace to the other hand. (Augusta, a non-horsewoman, queries the use of 'to.') Each of us had severally and jointly a fascinating trip around this old globe of ours, that we call neither a pleasure trip nor an easy trip but nonetheless one we are happy we took and one we recommend for those who can at least ride in a wheel chair. Our trip by air, with 24 take-offs, was much less expensive than we had expected. A self-directed trip is the way we went, except for Japan where, in this year of the Olympic Games, space in hotels or on the trains is at a premium. Our approach was to get reservations by air mail at an accredited hotel (and the best was often not quite up to par) and rely on the concierge at the hotel for side trips. He is the source of the travel agents' information anyway, and his information is up to date. Any of you who may be interested in the following route, with the accommodations we found to be acceptable can drop me a line: Boston to Lisbon, Portugal; Athens, Delphi, Olympia and Naphlia in Greece; Cairo, Egypt; Beirut and Baalbec, Lebanon; Jerusalem, Jordan; Jerusalem and Haifa, Israel; New Delhi, Jaipur, Agra, Benares and Calcutta, India; Bangkok, Thailand; Hong Kong,

British Crown Colony. The best of a 14-day tour of Japan was followed by a rest in Hawaii and stopovers across the U.S. on our way back to Boston. Kindest regards." Frank is an attorney at law in Lincoln, Mass., where mail can be addressed to P.O. Box 12, Lincoln Road. Many thanks for those kind words and your offer of help.

**Sumner Hayward** telephoned that he had gone with the Appalachian Mountain group on the Windjammer Cruise out of Camden, Maine. This had offered an opportunity when he reached Rockland to phone Ray and Helen St. Laurent at their home in Vinalhaven, where he spent a most enjoyable afternoon. Sumner says they were momentarily expecting **Mich Bawden** to arrive by boat. We note that the Institute used for the cover of the 1964 Alumni Officers' Conference announcement a group picture from the previous conference which features a most studious Sumner in the foreground. . . . Just too late for the last issue of The Review came the announcement from Mr. and Mrs. Ralph J. DeLong of the then forthcoming wedding of their daughter, Mary Kay, to Robert F. Miller, Jr., son of our **Bob** and **Helen Miller**, on June 20 at Sapulpa, Okla. Excerpts from a number of letters from Bob, from his home at 1107 Chestnut Avenue, Falls Church, Va. 22042, to Ray and to your Secretary include the following: "I was sorry to miss the Alumni Day festivities this year but the past several months have been busy ones for the Miller family. On May 27, our fourth grandchild, Michael Robert Weaver, arrived to our oldest daughter, Peggy, who now has two girls and two boys. That's a lot better distribution than Helen's and my five girls and one boy. Bobby and Kay's marriage was the second big event. Helen and I and four of our daughters flew to Oklahoma and spent several days getting acquainted. A feature of our stay was the wonderful hospitality shown to us by **Bill Sherry**, who lives about 15 miles away in Tulsa. He invited us to the Tulsa Club for luncheon and then entertained the Sherry, Miller and DeLong families for dinner at the swanky Petroleum Club. It was unforgettable and something that will always be a most pleasant memory. Bill certainly did himself proud. The newlyweds had a three-week honeymoon in Europe and are now living in Wood Ridge, N.J. Bob is a manufacturing engineer at the main plant of the Continental Can Company in Paterson, N.J. Helen and I recently visited the Reynaldo's in Bethesda, Md. You will recall that we met them at the home of **Helier** and **Graciela Rodriguez** during our class reunion in Cuba in 1958. Rita is Graciela's sister. Her husband, who had his own business, is working as a technician for a research company. They told us plenty about the current situation in Cuba. Helen joins me in best wishes to you."

We can now complete the record of Saul Silverstein's 14th overseas trip since 1952, which was interrupted by The Review's summer vacation. Eight weeks of business, seminars, lectures and vacation are covered in minute detail through the medium of Saul's 12 lengthy letters to the folks back home, each comprising a diary plus a section of amazing comments on



every conceivable subject and observation along the route. The itinerary included Japan and Korea, where Saul represented the U.S.A. in the conduct of a four-day seminar in Seoul for 60 leading executives from 10 Southeast Asian countries. Then India, Thailand, Malaysia, Hong Kong and return via Honolulu to lecture at the University of Hawaii. We did our best to answer his inquiry from Thailand about Prince Songkla, as already noted. In Honolulu, **Harry** and **Catharine Field** were most thoughtful and cordial hosts to Saul and to Rigi, who met him there for the return trip. The travel diary notes: "Harry and Catharine helped me decorate Rigi with four beautiful leis on arrival of the 'S. S. Lurline.' They drove us to the Hawaiian Village for lunch. Catharine is a Smith gal whose family 'missioned' from Boston to Hawaii generations ago while Harry outgrew Virginia via M.I.T. and then went native via Catharine. He recently retired from the vice-presidency of the Hawaiian Electric Company. They are a fine couple with two sons, respectively with local United Air Lines and Honolulu Telephone Company. Catharine's home grown orchids are beautiful. Imagine being lucky enough to move here right from Cambridge in 1921 and to live here into retirement. The Fields have six grandchildren and one due momentarily." Paralleling these notes came a fine letter from Harry, which says: "Saul Silverstein stopped in Honolulu for a rest on his way home. While resting (?), he has participated in conferences at the University of Hawaii, a hotel management meeting at the Hawaiian Village and on next Friday night at the synagogue. Catharine and I will attend the synagogue meeting. I am required to wear shoes but no hat. Today, he has a whirlwind tour by air of several of our islands. Most of us require at least a week for one island but Saul is doing them all in one day! We will all get a rest after he leaves next Monday. Thought you would be interested in the news article in our morning paper. Hope you have fully recovered from your auto accident and will come out to visit us soon. Much aloha."

Saul's notes continue: "Dined with the Fields in The Willows. Had a choice spot over a pool filled with giant golden carp, swimming below rainbow-hued water lilies. Excellent dinner, fine friends and enchanting atmosphere. We four went to Temple Emanu-El. Services were enhanced by singing of Dr. Max Levine, '12, a retired biologist who left Iowa in 1947 to recuperate from a coronary. He has a brother, M.I.T. '04, who is a civil engineer, and another, famed Dr. Samuel Levine, Boston's heart man. We had a nightcap in nearby Field's home. Next I went island hopping from 6 A.M. to 6 P.M. to eight islands—850 miles by air, 60 by auto and 6 by boat. Can't see why one would want to leave Oahu except for extreme quiet." To top all this, the Honolulu Advertiser of May 19, 1964, sent by Harry, had a long illustrated feature story, entitled "This Man Knows Labor Management Relations." The lead paragraph says: "Saul M. Silverstein, a rotund 63-year-old business executive with a seemingly unlimited supply of energy, has arrived in Honolulu after imparting

his know how to the Koreans. He will speak to students of the University of Hawaii School of Business." Wish The Review could print a lovely color photograph which has just arrived, showing Harry and Catharine with Rigi, just after she received those four leis. The Minox did a good job!

Our sincere thanks go to **C. Harry R. Johnson** for his splendid letter, which says: "It has been some time since I corresponded with you in regard to my recent activities. Having reached the age of 66, I have just retired as president of the Consolidated Packaging Corporation, formerly known as the Consolidated Paper Company. I reached retirement age a year ago but agreed to remain as president until reorganization was complete, because of a merger. I will retain my office at the plant in Monroe, Mich., and will continue on the board of directors as vice-chairman. Mrs. Johnson and I have built a new home at Pt. Clear, Ala., in the Lakewood Club Estates, adjacent to the No. 1 tee of the golf course. Because of the fast and convenient air travel, I will go up north for a week each month. Mrs. Johnson and I have taken active parts in the work of the Trinity Episcopal Church on both parish and diocesan levels. I had the privilege of being chairman of the building committee for the new parish house and have served as vestryman and senior warden. I have been corporate gifts chairman for the Monroe County Torch Drive, a member of the Citizens Advisory Committee under the mayor of Monroe and have served on the boards of both Mercy and Memorial Hospitals in Monroe. I am a director of the National Paper Board Association and have recently been appointed to the Lake Erie Basin Technical Committee under auspices of the U. S. Department of Health, Education and Welfare. I am a past president of the Monroe Golf and Country Club and a lousy golfer. We have two daughters, Mrs. Harry A. Lockwood, who went to Connecticut College and lives in Monroe, and Mrs. Robert R. Redman, who went to Wellesley and lives in Yakima, Wash. Both are married to attorneys. My new home address is P.O. Box 318, Pt. Clear, Ala." Our best to Harry and Mrs. Johnson for many years of health and happiness in their retirement. . . . Your Secretary was also retired from I.T.T. as of the end of last June, and we are preparing our newly-acquired New Jersey shore home for permanent occupancy as soon as we have disposed of our property in Glen Ridge, N.J. I am in process of putting my writing experiences in various industrial, promotional, newspaper and magazine fields to use as a free-lance writer or editor of technical or non-technical books, papers, reports, etc., for whomever will give me a job to do and a deadline to meet.

We regret to report the passing of two members of 1921 and wish to extend to their families the sincerest sympathy of the entire class. . . . **Harold Mauger Estabrook** of 45 Main Street, Bridgewater, Mass., died on August 18, 1964. He was associated with us in Course II. Born in Arlington, Mass., he had served as a selectman in that community from 1935 to 1944. He had been a special

agent for many years with the Boston insurance firm of Patterson, Wyld and Winkler and had also been the state agent for the Aetna Insurance Company of Boston. He had recently been president and treasurer of the Sholerton Insurance Agency in Bridgewater. A director of the Arlington Cooperative Bank, he was also president of the Bay State Club and a trustee of Symmes Hospital. His memberships included the Touchdown Club and the Gridiron Club. He is survived by his wife, Mary; a son, Harold M., Jr., of Bridgewater; two daughters, Mrs. David Chamberlain of Bridgewater and Mrs. Ralph Bradford, Jr., of Duxbury; two brothers, Milton of Groton and Louis of Pittsfield, N.H.; a sister, Miss Edith Estabrook of Chicago, and 11 grandchildren. We are indebted to Chick Dubé and Ray St. Laurent for aid in preparing these notes . . . **Glenn Phelps** of Henrietta Farm, Lutesville, Mo., has passed away but no further details are available. A graduate of Washington University, where he obtained the A.B. degree in 1918, he was associated with us in Course XVI. He had long been an architect, with offices in New York City and in Lutesville. . . . Your courtesy and co-operation in providing information for these columns is greatly appreciated by your secretaries, who wish you would take a spare moment between now and Thanksgiving to write us either your first letter or the next instalment on your last one. Try it and see how good you will feel to know you have given us something to be real thankful for in being able to present your news adequately and correctly.—**Carole A. Clarke**, Secretary, 608 Union Lane, Brielle, N.J. 08730; **Edwin T. Steffian**, Assistant Secretary, c/o Edwin T. Steffian and Associates, 376 Boylston Street, Boston, Mass. 02116.

## '22

Greetings from the Buffalo end of Lake Erie and the Boston end of the Atlantic Ocean. We hope that you all have had a pleasant and healthful summer with adequate preparation made for part of your winter to be spent in southern sunny climes. Our usual celebration on Alumni Day started with a supper party given by **Madeline** and **Parke Appel** in Dover on Sunday afternoon. This get-together has become a class institution and is one of our most enjoyable features. Thank you **Madeline** and **Parke**! Included in the Alumni Day festivities were **Irving** and **Mrs. Abrams**, **Parke** and **Mrs. Appel**, **Donald Carpenter**, **Yardley** and **Mrs. Chittick**, **Fred** and **Mrs. Dillon**, **Bertha Dodge**, **Warren** and **Mrs. Ferguson**, **Whitworth Ferguson**, **Morris** and **Mrs. Gens**, **Dewey Godard**, **Clayt** and **Mrs. Grover**, **Oscar** and **Mrs. Horovitz**, **William Hyland**, **Julian Lovejoy**, **Ronald Macdonald**, **Randolph** and **Mrs. Myer**, **W. F.** and **Mrs. Potter**, **Fearing Pratt**, **William** and **Mrs. Riley**, **Bernard Rivkin**, **Hyman** and **Mrs. Rosengard**, **William** and **Mrs. Russell**, **Hugh Shirey**, **Dale** and **Mrs. Spoor**, **Flurence Stiles**, **Kenneth Sutherland**, **Robert**



Tonon and Conant Webb. It reminded your secretary of the poem, "Although I admit I have slowed up a bit, And I'm far from the sprightly and spry age; It comes as a shock and it's hard to believe, These decrepit old fellows are my age!" We are only joking. It isn't true about '22. It was a most pleasant day and the report of class gifts was most thrilling. We also heard much regarding the future of M.I.T., its higher standards and its complexity of operation.

Word was received during the summer of the retirement of **Laurence B. Davis** of Stoneleigh, Bronxville, general manager of international sales for Socony Mobil Oil Company. During his career Larry has made 102 ocean crossings and visited 56 countries. For the past five years he has been responsible for world wide sales of Mobil marine lubricants, aviation products and home sales volumes of crude oil and petroleum products. Larry will become associated with Oceanic Process Corporation, 120 Wall Street, New York. . . . **Bartow van Ness, Jr.** retired in August from the Pennsylvania Power and Light Company as chief electrical-mechanical engineer. He previously had held engineering positions for Pennsylvania-Water and its related company Safe Harbor Water Power Corporation. He is a fellow in the I.E.E.E. and the A.S.C.E. as well as a member of many other engineering societies. Mr. and Mrs. Van Ness will move from Bethlehem to Baltimore. . . . **Lawrence W. Trowbridge**, chief estimator in the Newark office of the Lummus Company, has retired after completing 33 years with Lummus. Previous to that he had been a chemist for Babcock and Wilcox and chief engineer for International Engineering Works in Framingham. The Trowbridges moved to their present home in Stamford, Conn., in 1954 where they can enjoy the great outdoors and commute to the hills of Vermont. Larry enjoys hikes, birds, wild flowers and is interested in rocks and minerals. . . . Professor **Albert P. Powell** retired in June after eight years as a member of the Lafayette College Engineering Department. He had previously taught at Pennsylvania State University for 31 years before going to Lafayette in 1956. Al and Margaret now plan to move back to State College. Professor Powell has been adviser to the Pennsylvania State Chapter of Triangle and a counsellor to the joint student chapter of A.I.E.E. and I.R.E. He was also district chairman of A.I.E.E. and holds a life membership in the American Society of Engineering Education and Eta Kappa Nu.

We again report on the success of the book by **Daniel P. Moyanihan** of our class and **Nathan Glazer**, "Beyond the Melting Pot." The Key Reporter of Phi Beta Kappa states that it is "a thoroughly readable, documented analysis of the economic, political, educational and cultural status of Negroes, Puerto Ricans, Jews, Italians and Irish in New York City. Their differences have changed but not melted away: it is striking that in 1963, almost 40 years after mass immigration from Europe to this country has ended, the ethnic pattern is still so strong." . . . **John J. Cychol**, formerly district engineer of the Illinois Division of Highways, has

accepted a position with **Homer L. Chastain and Associates**, Decatur, Ill. During his 42 years with the highway department, Mr. Cychol held various engineering positions leading to his appointment in 1957. . . . **Ray C. Burrus** of Associated Consultants, Inc., has written a most interesting article "Evaluating the Potentials of EHV Networks." Another very interesting article under his authorship is entitled "The Case Against In-City Atomic Power."

The sympathy of our class is sincerely extended to the families of **John R. Sheffield, Jr.**, New York; **George T. Bailey**, White Plains; **John W. Hemphill**, East Pasadena; **Eric B. Townsend**, Paris, France; **Edward A. S. Morse**, Charlestown, W. Va.; **Alfred J. Maria**, New York; **Charles M. Taylor**, Westfield, N.J.; **C. L. Girouard**, Nashua, N.H.; **John T. Nichols**, San Francisco. . . . Among the new addresses are: **James Duane**, Plymouth, Mass.; **Lawson T. Blood**, Arlington, Va.; **Laurence B. Davis**, Osterville, Mass.; **Theodore T. Miller**, Prides Crossing, Mass.; **E. Allan Reinhardt**, Jacksonville; **Thomas H. Stubbs**, Atlantic City; **Thomas H. Gill**, East Orange, N.J.; **Walter V. Morgan**, Fort Lauderdale; **Alfred Wolf**, Berkeley, Calif.; **Ray C. Ellis**, Dark Harbor, Maine. Your secretary is now off to take two points off his golf handicap and his belt size.—**Whitworth Ferguson**, Secretary, 333 Ellicott Street, Buffalo, N.Y. 14203; **Oscar Horovitz**, Assistant Secretary, 33 Island Street, Boston 19, Mass.

## '23

Alumni Day, last June marked our 41st year out of M.I.T. and reminded me that time marches on. Attending were: **Horatio and Mrs. Bond**, **John E. and Mrs. Burchard**, **Harry M. Chatto**, **Robert T. and Mrs. Colburn**, **Hugh S. and Mrs. Ferguson**, **E. Louis Greenblatt**, **Herbert L. and Mrs. Hayden**, **Olcott L. Hooper**, **Robert J. Hull**, **George A. Johnson**, **Elliott P. and Mrs. Knight**, **Forrest F. and Mrs. Lange**, **Edward and Mrs. McSweeney**, **Hyman F. and Mrs. Marshall**, **Robert H. Park**, **James A. and Mrs. Pennypacker**, **Howard F. and Mrs. Russell**, **David W. and Mrs. Skinner**, **Philip C. Smith**, **Julius A. and Mrs. Stratton**, **A. M. and Mrs. Valentine**, **Miss Dorothy W. Weeks** and **W. B. Greenough, Jr.**. . . . The San Antonio Express for June 8 reported that **John W. Beretta** was named one of 50 prominent Americans to receive the Golden Plate Award of the American Academy of Achievement. Ceremonies were held June 25-28 in Oceanside, Calif. John is president of Beretta, Greenslade and Associates, consulting engineers, and of the Travis-St. Mary's Company. John's biography is in "Who's Who." He is a past recipient of the Army's Distinguished Civilian Service Award.

**George W. Bricker, Jr.** has an interesting article in The New Englander for April, 1964, entitled "When the Executive Goes Back to School." . . . **John E. Burchard** was one of six New Englanders decorated for services rendered in the

domain of cultural relations between France and the United States. He was made officier de l'Ordre des Arts and des Lettres of the French Republic on May 20, 1964. I understand that this new order is the highest cultural award, except for the French Academy. As most of his classmates know, John, who as the first dean of the School of Humanities and Social Science at M.I.T., retired at the end of June. In announcing his retirement, M.I.T. said: "Professor Burchard has had a significant influence on academic policies and has proved the compatibility of the esthetic with the scientific." His retirement plans include a visiting professorship at the University of California at Berkeley, followed by a return to M.I.T. to teach in the Sloan School next spring. The Carnegie Foundation has made a grant to M.I.T. to support Dean Burchard's studies of architectural history. His administration has seen the establishment of strong graduate programs in political science, philosophy, psychology and linguistics. He has been a leader in the development of programs of drama, lectures, music and art at M.I.T. In World War II he headed major research programs in problems of navigation and cleared the way for forces in the great amphibious landing operations. He also headed four military-scientific missions to combat theaters. In 1948 President Truman decorated him with the Medal For Merit. He is a former trustee of Mount Holyoke College and the Museum of Fine Arts in Boston. He received an honorary doctorate in architecture from the University of Michigan in 1956 and the Outstanding Achievement Award of the University of Minnesota in 1960. There is an interesting article by John in Arts and Architecture for March, 1964, entitled "In Search of Theory."

**Leonard E. Carlsmith** of 32 Parkview Terrace, Summit, N.J., has retired from Esso Research and Engineering Company after nearly 29 years with them. A member of the legal division, Mr. Carlsmith was involved with the promotion, sales and service of licensing processes. A chemical engineer by education, he had worked in the company's legal area since 1957. A native of Hawaii, he got his A.B. from Stanford University in 1921, his master's in chemical engineering he received from M.I.T. in 1923, and the Ph.D. in chemical engineering from Columbia in 1935. His distinguished company career included work on numerous company projects here and abroad. In addition, he worked with the United States War Department on a special assignment in Germany and Japan during and after World War II. He and his wife have three sons and five grandchildren. . . . The Bangor (Maine) News of June 19 reported that Professor **Kenneth G. Crabtree** is retiring as a member of the University of Maine faculty. He is a native of Hancock, where he will live after his retirement. . . . In an address on "Engineering and the Public Interest," to the National Council of State Boards of Engineering Examiners, on August 18, at Philadelphia, **Henry B. duPont**, a director of the DuPont Company, said:

"In this age of technology, it is the engineer who transforms a new idea or a new substance into something useful that can be produced for the benefit of mankind." . . . **Earle A. Griswold** has been elected president to fill the unexpired term of the late judge Ernest E. Hobson at the Palmer, Mass., Savings Bank. . . . The **Herbert L. Haydens** have been on a trip through Nova Scotia, Cape Breton and the Gaspé Peninsula and report cool and foggy weather. . . . The Newburyport (Mass.) News reported that President **Elliot P. Knight** of the Wheelwright Scientific School stated that it had been necessary to make a reassessment of scholarship grants.

The Manchester (N.H.) Union Leader of August 11, reported the death of Norman Prescott Randlett, '22, of Prescott Hill, Laconia, N.H. He was a widely known architect and a past president of the New Hampshire Chapter, American Institute of Architects. He designed buildings in many parts of the state. One of his recent projects was the design for a proposed 80-bed wing of the Belknap County Home infirmary. He was an Army veteran of World War I, a member of the Laconia Congregational Church, the Society of Mayflower Descendants, New Hampshire chapter, American Institute of Architects and the National AIA and Laconia Country Club. He was a trustee of the Layton Home and a former member of the Laconia Kiwanis Club. . . . Word has also been received of the passing on June 17, of **Edward P. Roll, Jr.**, Assistant Vice-president of United Corporation, New York, an investment company. He joined the United Corporation in 1947. From 1936 to 1941 he was a financial analyst for the Securities and Exchange Commission and the Office of War Utilities during World War II. He was a member of the M.I.T. Club of New York and the Shanghai Tiffen Club of New York. Surviving are his wife, Margaret, two daughters and several grandchildren.

In the Journal of Metals for April, in an article "Conference on Crystallography held in Rome; Representatives of 33 Nations Attend," it is noted that one of the invited papers "Temperature Diffuse Scattering of X-rays" was by **Bertram E. Warren**. . . . The Technology Review has reported that an Alumni Fund worker in the Van Nuys, Calif., region reported early this summer that our classmate **Preston Woodling** of 11853 Kling Street, North Hollywood, was quite seriously ill; we have no details of his illness. . . . Word has been received of the deaths of **Fred W. Herlihy**, Orangeburg, S.C., and **Alexander G. Small**, Pasadena, Calif., but no details are known.

The following changes of address have been reported: **William P. Allis**, 33 Reservoir Street, Cambridge, Mass. 02138; **Harry M. Chatto**, 1010 Massachusetts Avenue, Cambridge, Mass. 02138; **Winthrop G. Dow**, 32 Calibogue Cay, Hilton Head Island, S.C.; **Samuel S. Elkins**, 6720 Northwood Road, Dallas, Texas 75225; **Joseph Fleischer**, 340 Parker Street, Newton Center, Mass. 02159; **Earle A. Griswold**, Dingley Dell,

Palmer, Mass.; **Miss Myrna S. Howe**, Concord National Bank, Concord, N.H.; **W. Gordon Hughes**, 189 Elm Street, South Dartmouth, Mass. 02748; **George H. Hurley** (a note says retired from GMC), Route 2, Box 244, Burlington, Wis. 53105; **William C. Maus**, 700 Pine Knoll Drive, Belmont, Calif.; **William F. McNary**, 59 Ocean View Road, Cape Elizabeth, Maine 04107; **Stephen B. Metcalfe**, Nick Road, Madison, Conn.; **Richard P. Ovenshine**, 504 Fordham Drive, Alexandria, Va. 22307; **Hugh Perrin**, 5804 Connecticut Avenue, Chevy Chase 15, Md.; **Walter T. Rolfe**, 5683 Shady River Road; Houston, Texas 77027; **Alfred J. Schneider**, 75 High Street, Sharon Hill, Pa. 19079; **William W. Vicinus**, 4301 East Exposition Avenue, Denver, Colo.—**Forrest F. Lange**, Secretary, 1196 Woodbury Avenue, Portsmouth, N.H. 03801; **Bertrand A. McKittrick**, Assistant Secretary, 78 Fletcher Street, Lowell, Mass. 01852.

## '24

First item of business, of course, is a brief report of our 40th Reunion. Brief, because those who were there will never forget it, and those who were not will not believe how much fun it was. So we will just hit on some of the highlights. It was our biggest reunion. There were about 130 of us at the Oyster Harbors Club and of that number 75 came up to M.I.T. Sunday afternoon and stayed through Alumni Day on Monday. There was a lot of golf played, of course, and a planned fishing trip was aborted when some other group (the Class of '29 is suspect) absconded with the chartered boat. **Al Roig** turned up with some very interesting films which were shown on Friday. Saturday night was the big cocktail party at **Tom Coogan's** house, next door to the club. It was to have been held in his beautiful garden, but the rains came so we stayed indoors. The Coogans were wonderful hosts, and we are greatly indebted to them. **Jim Killian**, '26, came down that evening and gave a few well-chosen words at the banquet. **Paul Cardinal**, as acting president, also spoke, and when the report of the nominating committee had been made and unanimously approved, he found himself officially elected to the job. Here are our officers for the next five years. President, **Paul Cardinal**; Executive Vice-president, **Russ Ambach**; Eastern Vice-president, **Nate Schooler**; Western Vice-president, **Bill MacCallum**; Central Vice-president, **Gib Cowan**; Vice-president at large, **Nish Cornish**; and no change in the following: Treasurer, **Ray Lehrer**; Secretary, **Chick Kane**; and Class Agents, **Frank Shaw** and **Fred Westman**. . . . There was no great raft of gifts and mementoes such as we had at our 35th, but everyone got a set of 8 highball glasses, suitably decorated, as a souvenir, and a spirited auction of the few left over was held after dinner. Chairman **Cy Duevel** also came up with some handsome Thermos products for those who had been of major help to him in running the reunion.

On Sunday more than half of us came up to M.I.T., where we were quartered in the beautiful new women's dormitory, McCormick Hall. Cocktails in the penthouse with its breathtaking view of the Charles River Basin at dusk was a memorable experience. President and Mrs. Statton joined us, and Jay spoke briefly at dinner afterwards. After dinner we again repaired to the penthouse, and your secretary is informed that festivities carried on until well past the midnight hour. He had left long since. They were continued the following night after Alumni Day had closed with the Pops concert in Kresge. One of the highlights of Alumni Day was at lunch in the Great Court when Paul announced our 40-Year Reunion Gift, \$511,000. It was one of the largest reunion gifts ever made, and we may all be proud of the way in which the class came through. It would be impractical to list here all who attended, but a few should certainly be mentioned. Kay Atherton, widow of our late president, was a most welcome guest. **John Fitch** and his family were up from Chile, and **Dom Bellingeri** from Argentina. From Mexico came the **Cornishes** and **Rutilio Torres**, the latter working in reunion as part of a round-the-world trip. The Roigs and **Luis Ferre** were there from Puerto Rico. And the West Coast contingent, most with their wives, included Phil Bates, Mal Finley, Bill MacCallum, Hank Simonds, and Percy Wilson. Attending his first reunion with his wife and baseball-fan son, was **Luang Videt-Yontrakich** of the Royal Thai Embassy in Washington. There were several first-timers, including **Andy Kellogg** and **Henry Rau**, and a few last-minute cancellations from people such as **Frank Manley**, whose employees thoughtlessly called a strike that weekend. The Roigs evidently decided Rutilio Torres had the right idea, and set off on a trip of their own to the Far East after a couple of weeks in Hawaii. Among other things they found that Tokyo was all torn up for the Olympics and was very hot and dirty, with water rationed.

Two retirements were reported during the summer. **Raymond L. Bowles**, General Manager of Production Planning in Armstrong Cork's Technical Services Department, retired on August 1 after 40 years with the company. . . . And on September 1, **Robert W. Stewart** retired as a Singer vice-president and moved to the country, Hancock, N.H. . . . We have to report four deaths. **Samuel B. Abbott** of North Reading, Mass., is the first, but we do not know the date. . . . In June **George P. Swift** died. A long-time member of the Institute staff, George had about as many M.I.T. degrees as it is possible to get—an S.B., S.M., and Sc.D. Further, his widow is an alumna, in the Class of '41, and he had three brothers who were also graduates. George had an all-M.I.T. family. As a consulting engineer he had attained considerable distinction in the fields of metallurgy and electrochemical engineering. . . . Lieutenant Commander **Joel A. Davis** died in July at the Naval Hospital in St. Albans, N.Y. He was probably our oldest alumnus, retired long since as totally disabled after



44 years of active duty with the Navy. . . . **George Neftlich** was with us at Alumni Day. He had rarely missed such an affair or a reunion through the years and came this year even though his health had been failing for some time. He died on August 25. To the families of all of these classmates who have passed on goes the sympathy of the class. —**Henry B. Kane**, Secretary, M.I.T., Room 1-272, Cambridge, Mass.

## '25

Reported elsewhere in this issue of The Review is information concerned with the Fifth Alumni Officers' Conference. Our class was extremely well represented and every advantage was taken of this fact. Gatherings of '25ers continued throughout the program. This resulted in considerable talking about the 40th Reunion plans and our 40th Reunion gift, and rather extensive meetings were held on the evenings of September 10 and 11 for some detailed planning. Although you will be hearing much from both the Reunion and Gift Committees in the near future, this will remind you that the reunion dates are June 11 through 14, 1965. Those who attended the Alumni Officers' Conference were **Harold Bishko**, Alumni Fund, Elmira, N.Y.; **Charles Cooper**, Educational Council, Newark, Del.; **Alan W. Crowell**, Alumni Fund, West Hartford, Conn.; **Gilbert L. Delugach**, Educational Council, Memphis, Tenn.; **Chink Drew**, Class agent; **President Fred Greer**; **Mac Levine**, **Sam Spiker**, Reunion Gift Chairman; **Dave Goldman**, Reunion Chairman; and your secretary.

Although the 1964 Alumni Day is now history, our class was well represented at the various activities of that day. In addition to your secretary and Mrs. Foster the following were in attendance: **Henry Bacon**, **Sam and Mrs. Glaser**, **Dave and Mrs. Goldman**, **Fred Greer**, **Bob and Mrs. Hatton**, **Bob and Mrs. Hodson**, **Jim Howard**, **Ed Kussmaul and son**, **Charles, Mac and Mrs. Levine**, **Ed McLaughlin**, **Frank Mulcahy and Sam and Mrs. Spiker**. It was our privilege to have **Volta Torrey**, Editor of The Technology Review, as our Association guest at the banquet.

Two deaths have been reported during the summer months and have been received by your secretary at a rather late date. **Robert R. Thomas** died on December 24, 1962, at Irvington-on-Hudson, N.Y.; and **William W. Binford** died at Richmond, Va. No date was given us. . . . A couple of months ago a very nice letter came from **Fred Walker**, who at the end of June elected to take an early retirement from the DuPont Company after "37 years of a varying and always challenging career in such positions as chemist, research supervisor, U.S. patent agent, information scientist, etc. with the Research Division of the Electrochemicals Department at Perth Amboy, N.J., Niagara Falls, N.Y., and Wilmington, Del." Fred is planning to continue studying and consulting in the field of chemis-

try. He has been specializing with formaldehyde. As Fred points out: "This is one case where the specialist has to know more and more about more and more rather than 'less and less' (as specialism is often defined). Formaldehyde applications cover the whole field of synthetic chemistry and range from employment in trace quantities for virus deactivation to billion pound markets in the resin industry. If all goes well, I hope sometime to visit the many fellow scientists all over the world who have corresponded with me in connection with our mutual interest in formaldehyde." Fred and his wife have settled down in an old house in Haddam, Conn., on the west side of Route 9, about 10 miles south of Middletown. He is also looking forward to his hobby of oil painting and points out that he has been fortunate enough to have pictures in a number of art shows. The high point was a prize in a western New York show in Buffalo's Albright Gallery. With his settling in Haddam Fred expects to do a lot more than painting of canvases, since he has a whole collection of old floors and walls and 12/12 windows which are going to require a fair amount of painting.

A news release from the Keohring Company, Milwaukee, noting a central management change last June, indicates that **Galen M. Taylor**, formerly vice-president of manufacturing is vice-president of the company and now on extended assignment in England. . . . From the Esso Research and Engineering Company comes word that **Bill Asbury** has been elected executive vice-president of that company. . . . A post card from **Tony Lauria** indicates that this past summer he has confined his traveling to the North American continent, having spent about 10 days in Arizona in April and two weeks in Montreal, Quebec and the Gaspé Peninsula during the summer. . . . Finally be sure to mark the reunion dates on your calendars.—**F. Leroy Foster**, Secretary, Room 5-105, M.I.T., Cambridge, Mass. 02139.

## '26

Where do we begin? This is an annual problem after coasting through the summer with no class notes to write. We accumulate quite a file during these months, but that is not where we plan to begin. As a matter of fact I would be quite remiss if I did not tell you that the notes are being written in Pigeon Cove in the living room of our guest house with one eye cocked on the activities in Pigeon Cove Harbor and the other on the block of paper upon which my pen makes halting starts and stops trying to develop the momentum necessary to get rolling again. I thought of **Guy Frisbie** right after breakfast and his wonderful machine called the "Disposal." We do not have one of his machines at Pigeon Cove—it is really not necessary. I made the pancakes this morning and slightly overestimated—by 15 to be exact. After breakfast I spread them on the seawall one by one and out of nowhere

30 or 40 seagulls swooped to clean them off the wall in far less time than Guy's wonderful machine, with less power consumption but with considerable noise.

This weekend concluded the fifth bi-annual Alumni Officers' Conference at the Institute. You will find details on other pages of The Review. While several '26 men were registered, I was in and out of the meetings and caught up with only three—**Jim Killian**, **Louis Darmstadt** and **Ted Mangelsdorf**. Other classmates registered were **Andrew Brugnoli**, **Bob Dawes**, "Pink" **Salmon**, **Bill Walworth** and **Willard Woll**. At the dinner **Ted Mangelsdorf** was presented the Bronze Beaver Award of the Alumni Association by Association President, **Donald F. Carpenter**, '22, for his outstanding achievements. **Ted** organized the new New York Center with great success and is also a member of the M.I.T. Corporation. We were happy to be on hand to personally extend congratulations to **Ted** from the class. (Another recipient of a Bronze Beaver Award for outstanding service to the Alumni was the Secretary himself—**George W. Smith**.—Ed.) After the dinner **Ted** and I rode back to **Baker House** together and I learned that **Ted's** "Pigeon Cove" is **Cumberland Farm** on the **Pamunkey River** in **Virginia**. We were not together long enough for me to get the details on **Cumberland Farm** but the few tidbits sounded interesting enough so that we hereby summons **Ted** to write us, not from his ivory tower in New York but from his favorite spot in **Virginia**—I'm sure it will be interesting. I am also sure that there are a lot more such retreats inhabited by members of the Class of '26. So that **Pigeon Cove** will not be the only hideaway familiar to the class, why don't you write us about yours?

During the summer we had the pleasure of **Tom Pitre's** presence on the scene at **Pigeon Cove**. While "Pete" retired from his full time activity at the Institute last year, he stayed on with the Alumni Association as Director of Clubs. This activity allows him his summers, and I completed remodeling a small house on our place at **Pigeon Cove** just in time for "Pete" to take over in June; and he really took over my remaining problem—a new lawn. If I had paid for the tender loving care given the new lawn and the hours he put into it, he would have had free rent plus. I am sure that lawn weeds are going to shun **Pigeon Cove** for many years to come as a result of the rough treatment they got from "Pete." His compensation—a boyish waistline of which he is very proud and a beautiful sun tan. It was really a pleasure to have him in our company during the summer. . . . About midsummer I received a form for the new Alumni Register. One of the questions was, "Who is the chairman of your 40th Reunion?" There also was a deadline for the information. Consequently **Class Treasurer**, "Pink" **Salmon** and I got together and we quickly arrived at a candidate—then we communicated with **Class President Dave Shepard** in **London**, and he agreed wholeheartedly with our choice. We all felt **Don Cunningham** had such a fine record as an organizer on previous re-



union committees that he was the logical one to chairman our 40th and his location in the Boston area made the selection even more important. It was no pushover but after a little persuading Don agreed, and we all feel very fortunate. Dave sent us a note from London that he was particularly pleased. Already Don has been working on locations for this important reunion and within a few issues we hope to start giving you some preliminary information. . . . **Austin Kelly**, meanwhile, has been active getting our reunion gift program rolling. Let me quote from a recent letter of Austin's. "Dear Smitty: I know you and our classmates are interested in what my committee has been doing. First, we are continuing personal solicitations directed to getting a number of sizeable gifts, which we all agree are needed. Cards have been distributed to working classmates throughout the country, and we hope that reports will be back from these cards during September and October. We are in constant touch with the Alumni Office. We are becoming amateur detectives in tracking down classmates who have been out of touch for a number of years. All of this is leading up to our real hope that a progress report will be available to all contributors by the end of the year. We are still shooting high, as we hope to have half of the Fund, i.e. \$250,000 in sight by the end of the year. To help us, we would welcome any "Christopher Columbus" ideas that any members of the class may have for moving this along. There have been a number of heartwarming experiences—one gift already doubled, one sizeable unsolicited gift (a sacrifice), requests to participate from outside the class (we answered no, as we want to do this ourselves!). Just as a point of reference, this is being dictated in humidity of 99 per cent in a skyscraper in New York. The view is terrible and no gulls. Sincerely, Austin." Austin's final remark about the view and the gulls certainly anticipated this issue of the notes. The view is still good here, and since a sailboat regatta with 33 "Firefly" class boats is about to start I will no longer be able to keep one eye on my notes and therefore with best wishes for a pleasant Thanksgiving we say Cheerio.—**George W. Smith**, Secretary, E. I. duPont Company, 140 Federal Street, Boston, Mass.

# '27

**Jim Lyles'** condition is much improved since last spring. He is still at Burke Foundation in White Plains but expects to go home in October. (This is at 29 Boulder Trail, Bronxville, N.Y.) He has already made a visit to his country home in Canaan, Conn. Jim asked for early retirement from First Boston Corporation, where he had been a senior vice-president. This has been approved, but he will continue his services as a director and consultant to First Boston. One of the last jobs that Jim Lyles did, as class president, before his illness was to ask **Bud Fisher** if he would undertake to organize the Spe-

cial Gifts Section of 1927's 40th Reunion Gift to M.I.T. Bud has agreed to do this and he is already at work on the planning. A goal will be set after further study.

I had word from **Frank Staples** that he read in the Sugar Journal of the death on April 29 of **Robert A. Nadler**. Bob came from Plaquemine, La., entered Tech in his sophomore year, and graduated in Course II. His business career was devoted to the management of his family's 75-year-old Nadler Machine and Foundry Company in Plaquemine, a well-known manufacturer of sugar machinery. At the time of his death, Bob was president of this organization. He was also vice-president in charge of engineering of Baton Rouge's \$50 million port. Many will recall that he attended the 35th Reunion and Alumni Day in 1962. . . . **Frank Staples**, who is president of the SuCrest Corporation, was good enough to fill us in on some of his own recent activities. He has just completed a year as president of the Sugar Club, and a year as president of the Sugar Association, and this fall completes two years as president of the Garden City (Long Island) Country Club. During the latter term, a \$500,000 renovation of the clubhouse was completed. Frank is now beginning a term as Grand Master of Masons in the State of New York.

A really newsy note was received from **Glenn Jackson** in June, and I quote it almost in full. "I am still going to get down to Masons Island to see you. (He hasn't yet, but I wish he would.) Right now I am trying to organize 1927 thinking along 40th Reunion channels. I tried by postcard to get a significant group of boys together at lunch on Alumni Day, but with wives present and seats scarce, at the luncheon, we never did get together for a discussion. **Ezra Stevens** had written me that he couldn't make it; likewise for **Larry Grew** and **Art Connell**—all were jammed with business dates. Present at Alumni Day luncheon—but not collected very close together in that wonderful group of M.I.T. Alumni—were **Bill Taggart**, **George Houston**, **Frank Marcucella**, and **Bob Wise** and their better halves, **Dike Arnold**, **Harold Edgerton** and his wife, **Ed Chase**, and **Hector Moineau**. I probably missed some by not being able to stay in the evening. Betty feels that I should schedule fewer events each day and relax more, but I notice that she seems to enjoy the fast pace I set for myself and comes along most times. **Bill Taggart** has done some good work on our class reunion for June, 1967, and suggests the **Bald Peak Colony Club** in **Melvin, N.H.** It is open right now for our dates and I would like to hear some comments. I recently had a wonderful letter from **Johnny Norris** and quote in part: 'So I am still hale and hearty and grateful to M.I.T. for a real good education. I am a trustee of Grinnell College, here in Iowa. There's an awful lot of Norris family history involved in Grinnell. My oldest son and second son went there for two years before taking Course XV at M.I.T. as I did.' John is president of **Lennox Industries, Inc.** of **Marshalltown, Iowa**. I wish we could see him more often." Glenn goes on to tell about his continued efforts to lease or sell his 200,000 square-foot factory in **Nashua, N.H.** After this is

done, Glenn intends to cover most of New England as an industrial real estate broker, having recently received his New Hampshire license. Glenn is anxious for comments on the reunion location, and he also adds that he needs comments on whether wives should be present. He says: "Those that voted last time for no-wives may change their minds by 1967. Who is going to put on our class ribbons or hats if we don't have the gals there."

Having written to **Charlie Smith** asking for details on his recent move to Cincinnati, I was happy to receive the following in reply: "I acquired the **Bertram Company** here in Cincinnati January 1 and we 'blow a lot of hot air' all over the world with our various lines of 'industrial air' fans in sizes up to 12 feet in diameter. We have a nice business with a pleasant and capable organization. My son, **Chris**, who recently obtained his professional engineer's license in Ohio and had been with **A. M. Kinney Company** here, joined our staff as chief engineer. **Chuck**, my other son, is treasurer of **Young Industries of Louisville, Ky.**, a holding company for 12 subsidiary enterprises. He is a C.P.A. and will receive his law degree next spring. **Carolyn** and I have moved to **Indian Hill**, a suburb of Cincinnati, where we are much nearer our four grandchildren. However, being good old Connecticut Yankees, we sure miss the salt spray, the shore dinners, and hope to enjoy occasional trips east to Poughkeepsie and Cambridge for class reunions. I would be happy to hear from or see any of our classmates who are in or passing through Cincinnati." The **Bertram Company** address is 1417 Freeman Avenue, Cincinnati 14.

We are indebted to **Miss Dorothy Waugh**, sister of **Sidney Waugh**, for further material concerning the life of the famous sculptor. The board of trustees of the American Academy in Rome, at a meeting held after his death last year, adopted a minute from which I quote: "The monuments which he created in sculpture and design during a lifetime of prodigious activity are too numerous and varied to be commended here. Indeed, they need no commendation for they brought him, while he was alive, the fame and honors which were his due, and now assure the survival of his memory as one of the master artists of his generation. He was a fellow of the American Academy in Rome from 1929 to 1932 and was elected to the board of trustees in 1945. During his fellowship, he warmed the Roman scene with his unique gifts. As a trustee and member of the executive and fine arts committee and of many juries, he contributed generously to the effective operation of the Academy. To every meeting he brought his fine sense of discrimination, his perceptive wit and the striking elegance of his speech and person. . . . His mind was well nourished. He knew the incomparable value of great poetry and retained the best of it in his tenacious memory. He appreciated the subtle values of good living. His integrity as a man and an artist was absolute. . . ." An article in **National Sculpture Review** says "His greatest pleasure lay in the life of the mind, and although he regarded the fine arts as the greatest expression of that life,

he had always a sharp ear for other expressions of it. . . . When his commitment to sculpture became clear, he was considered by Robert Frost as a loss to the world of poetry . . . During the Second World War, he was a captain in military intelligence and, later, in the military government. He likes best to recall—and to tell amusing and touching stories about—the months when he was charged with responsibility for the governing of various towns in Italy, a country which he knew well and loved greatly. There is no doubt that the Italians found him a most unusual military governor, and a most sympathetic one." Sidney Waugh was an adviser to the M.I.T. Department of Architecture under his favorite instructor, Professor William Emerson. His nephew, John Waugh, is now a member of the M.I.T. faculty.

How many of our class are in Who's Who in America? Well, I only have a record of one: **Howard William Richard Biers**, senior consultant for Union Carbide International Company and well-known international metallurgist. . . . About every two years, the Alumni Officers' Conference takes place at the Institute. This fall, your class secretary represented 1927. There were panels, demonstrations and tours, and discussions of Tech's planning for the future. . . . A new listing sent to me by the Alumni Association shows the class with 716 living members, 131 deceased. . . . You are reading these notes in November and thoughts of your Christmas lists are not far away. How about putting the name and address of your class secretary (as below) on your Christmas card list and write me a few words of your news. That will guarantee a happy new year for the class notes! . . . There is a new address for **Allan T. Gifford**: 10400 West Court Street, Pasco, Wash.—**Joseph S. Harris**, Secretary, Masons Island, Mystic, Conn. 06355.

## '28

Eleven members of our class attended Alumni Day in June. This was a small but, of course, select group. Those attending with their wives: Elbridge Atwood, Maurice Beren, Jim Donovan, Edward Hartshorne, Ralph Jope, Fred Lewis and Max Parshall. Those who attended unaccompanied included Bill Carlisle, Jack Chamberlin, Carl Feldman and Herm Swartz. . . . In the June 6, 1964, issue of the Winnipeg Tribune, Manitoba, Canada, we read that "A good architect is more than one man. He is at once an artist, a psychologist, a designer, a businessman, a builder and a technician. He must combine all these traits with sound judgment and a strong sense of integrity. This definition of practicing architects was given by **John Alonzo Russell**, Dean of the University of Manitoba's Faculty of Architecture. Formerly known as the School of Architecture, it was recently elevated to the status of a faculty because of the school's stature in this field. Students come here from abroad and other parts of Canada to study architecture. Dean Russell himself is as complex a man as his definition

of an architect. He is an architect, artist, patron of the arts and teacher. He serves on the boards of the Royal Winnipeg Ballet and the art gallery. He has designed and painted sets for both the Little Theatre and the ballet. He has had his own showing of watercolours.

"He is one of the original members of the Canada Council and is the only Canadian named to the architectural advisory Committee of the Wascana Centre Authority—a multi-million dollar recreational, educational, cultural and governmental centre in Regina. He has been judge or professional adviser to several architectural competitions in Canada, including Winnipeg's city hall, the Fathers of Confederation monument in Charlottetown and the Calgary Olympic Development for the Banff 1968 Winter Games, which Canada didn't get. Dean Russell was born in Hinsdale, N.H., 57 years ago, and received his bachelor of science and master of architecture from M.I.T. Graduating in 1928, Dean Russell had just lined up a job as practicing architect with a firm in Philadelphia when he was recommended by his dean to fill an assistant professorship in the architecture department here. 'I hadn't really thought about teaching, but I decided to try it out for a couple of years. I just never left.' In 1932, he attended a summer session at the Fine Arts outside Paris, receiving a diploma in architecture. In 1946, Dean Russell became head of the architecture department. In 1950, the department became a school of architecture within the Faculty of Engineering, and in November, 1963, it became a full-fledged faculty."

From **Jim Donovan**, our loyal traveling correspondent, we learned that he recently had a short "Hi, Jim" postscript on a letter from **Nap (Henry M.) La-Croix**, who is apparently on assignment for Foster Wheeler at Tampa, Fla. Jim suggests that all of you '28ers who take winter vacations in Florida might note that Nap's P. O. Box is 2499. Although if Nap has the luck of most engineers, he will spend the summer in Florida and the winter at the Arctic Circle. . . . Jim also notes that he saw Jack Muskin, '27, in New York. Jack is a partner in the firm of Singmaster and Breyer. Jack has been very busy and was leaving for London, where he was to have part of a contract design that he is handling. . . . Let's quote Jim directly. "In St. Louis I had a bit of a time and saw Betty and **Bob Joyce**. Their son John starts as a freshman at M.I.T. this fall—a chip off the old block, heh! In California I mentioned our classmate **Willy Beard** to a friend, and this friend remembered Willy when he lived in Pasadena. He reminisced that Willy became interested in flying and one day, while he was up with his instructor (a young lady), the engine conked out with Willy at the controls. The instructor decided to take over; and after a happy landing Willy and the young lady were married. It is a pleasant story, hope it is true, and that Willy won't sue me for slander." . . . Jim reports that he himself has just received his commission from the Governor of the Commonwealth of Massachusetts making him a member of the Board of Registra-

tion of Professional Engineers and Land Surveyors. He says his first meeting with the board taught him what any intelligent man should have known—that he shouldn't have accepted the appointment! Why? Large amounts of work, very small amount of honor, and apparently some brickbats. Altogether the wrong proportions, and he warns classmates to ask questions before trying such a time-consuming job at our advanced age.

Correction please: The address of **Carl F. Myers** is Box 71A, Route #1, Clermont, Fla., not, repeat not, California. . . . From "Behind the Scenes" of the S.A.E. Journal of May, 1964, we read: "When **B. S. Kelsey** discusses V/STOL's, (see "The V" in V/STOL Could Be Versatility", p. 78) he brings to bear a background that includes more than 40 years of flying everything from Jennies to jets. Among other things, he has been an experimental test pilot, an Air Force general, and Hunsaker Professor of Aeronautics and Astronautics at M.I.T. He has been cited for his bravery and technical contributions to aviation." . . . And from the July issue of Journal of Oral Surgery we learn that our own **Bob Harris** was a member of the faculty at the 21st annual meeting of the American Institute of Oral Biology, October 5-9 at the Hotel Riviera, Palm Springs, Calif. . . . An Alumni Fund worker in the Van Nuys, Calif., region reported early this summer that our classmate **Maynard Babb** is quite ill. For those who would like to send cards or letters his address is 4631 Noble Street, Sherman Oaks, Calif.

A nice card came from **Trudy and Don Francis**. The card is of Snow Inn, showing the putting and bowling greens. Trudy asks, "Do you remember this?" They apparently went from Delray Beach to Nassau in their own boat. "Had a wonderful time and are looking forward to more boat trips." . . . **Dave Hayes**, Course X, has been named executive assistant to the Eastern Divisional general manager of Tidewater Oil. . . . And in Food Technology I am stopped by a large picture of **Bud (Elisha) Gray** receiving the I.F.T. 1964 Food Technology Industrial Achievement Award plaque as chairman of the board of Whirlpool Corporation. Apparently Whirlpool has developed the Tectrol system of slowing down the rate of deterioration of food materials in refrigerator storage. . . . In the May issue of C&EN we note that **Edwin F. Celette, Jr.**, has been named technical production manager of Monsanto Belgium at Ghent. . . . And your secretary modestly reports that he was recently elected president of the New Hampshire Horticultural Society as a representative of the blueberry and apple growers of the state.—**Hermon S. Swartz**, Secretary, Construction Publishing Company, Inc., 27 Muzzey Street, Lexington, Mass.

## '29

The Class of '29 held its 35th Reunion June 12, 13 and 14 at the Wianno Club in Wianno, Cape Cod, Mass. The committee



in charge of planning the successful reunion was headed by Kay and **Eric Bianchi**, assisted by Joan and **Wally Gale** and the crew including Evelyn and Brig Allen, Doris and Bill Baumrucker, Fran and Paul Donahue, Marie and Jim Fahey, Clara and Ed Farmer, Ellen and Ken Horgan, Ellie and Sol Horwitz, Florence and Ted Malmstrom, Mary and Frank Mead, Olive and John Rich and D. A. and John Wilson. Highlights of the reunion included a bus tour to Sandwich and West Barnstable, a visit to the Woods Hole Aquarium, golfing, banquet, business meeting and dancing to Ken Reeves' Orchestra.

A grand time was had by the following '29ers who attended: Bill Aldrich and three children, Brig and Evelyn Allen, Bill and Doris Baumrucker, Win and Marguerite Bearce, Bill and Sally Bowie, Dick and Nina Coveney, Tacks Crosby, Dave and Dot David, Karnig and Helen Dinjian, Paul and Fran Donahue, Norm and Ruth Earle, Jim and Marie Fahey, Ed and Clara Farmer, Bion and Helen Francis, Wally and Joan Gale, Jerry and Mary Gardner, Sol and Ellie Horwitz, John and Mary Joyce, Em and Lois Low and son, Emery, Jr., Jim and Marge Magenis and three children, Ted and Florence Malmstrom, Dan McDaniel, Frank and Mary Mead, Fritz and Dot Meissner, George and Barbara Meyers, Dave and Marylou Peene, Ed Perkins, Len and Martha Peskin, Dick Piez, Jack and Nell Plugge, Ed and Dot Powley, John and Olive Rich, Russ and Chris Shannon, Elmer and Ollie Skonberg, Amasa and Sara Smith, Gus Stein and son Nick, Roger and Mary Sykes, Wes and Jo Walters and granddaughter Connie, George and Olive White, Mrs. Lee Whiting and son Curtis, Jr., Bill and Jane Young.

At what is (approximately) the same age for all of us, our interest now is more in people than things, so we think of the job that Eric and Kay did; of **Frank and Mary Mead**, who worked with presence of mind at all times; and of **Brig Allen**, who regretfully resigned as class president after 35 years! **Gus Stein's** son was on leave from flying helicopters in Viet Nam; and Gus himself flew from Copenhagen, where in turn it developed **John Wilson** had gone to pick up a new boat. Our latest exchange students! Our newly elected officers are: **Eric A. Bianchi**, President; **Francis M. Mead**, Reunion Chairman; and **John P. Rich**, Secretary. . . . Class of '29 members who attended the Alumni Day activities were Winfield H. and Mrs. Bearce, Eric A. Bianchi, Kenneth C. and Mrs. Blanchard, Richard J. and Mrs. Coveney, Ruth A. Dean, Grace G. Farrell, Walter H. and Mrs. Gale, Virgil W. McDaniel, Francis M. and Mrs. Mead, Newell W. and Mrs. Mitchell, Leonard C. and Mrs. Peskin, John A. and Mrs. Plugge, John P. and Mrs. Rich, Elmer A. and Mrs. Skonberg, Gustave A. Stein, Jr., A. W. Conti and Peter, Amasa G. Smith, J. W. and Mrs. Walters.

We deeply regret the passing of classmates **Durand Churchill**, August 2, 1963; **Livingston Longfellow**, December, 1963; **Albert L. Eigenbrot**, January 21, 1964; and **Adam K. Stricker, Jr.**, August 2, 1964. . . . From news clippings, we learn that **Edward McLanahan Tittman** has been

elected as a member of the board of directors of Hecla Mining Company, Spokane, Wash. He is chairman and chief executive officer of American Smelting and Refining Company. . . . In May, Dr. **H. P. Meissner**, Professor of Chemical Engineering at M.I.T., delivered the Glidden Company Lecture at the Institute of Paper Chemistry on Fuel Cells. . . . The annual Gillett Memorial Lecture was presented by **Nathan E. Promisel**, chief materials engineer, Bureau of Naval Weapons, in Chicago on June 23 during the annual meeting of American Society for Testing and Materials. His lecture was entitled "Materials Trends and Significant Testing." . . . Kenerson Engineers, headed by **Waldo I. Kenerson** of East Lansing, are now affiliated with St. Clair and Douglas Pardee, architects, designers of the \$750,000-addition to Ford Motors plant at Utica, Mich. . . . By way of a note from Mary Mead, we were sorry to hear that Joan Gale slipped on the golf course this summer and broke her leg. . . . Questionnaires have been mailed to all members of the class, and the resulting news will appear in coming issues. To date, we have had 159 replies returned out of 667 mailed. Please send us more!—**John P. Rich**, Secretary, 67 Berkeley Street, Nashua, N.H.

## '30

Once again vacation-time is over for the class secretaries. The high point of the summer for the **Listers** was our opportunity to view the flotilla of full-rigged ships that visited New York in July from a very special vantage point, namely, the deck of **Jack Latham's** 'Palometa.' As previously reported in this space, Jack is commodore of the Boston Yacht Club, and the 'Palometa' is a beautifully fitted ketch that he had built for him in Holland, which includes such exotic items as a fireplace in the main cabin. Jack was on a committee to arrange for several of the full-riggers to visit Boston harbor at the end of their stay in New York. He and Ruth sailed down and anchored at the World's Fair Marina, where Marion and I, several other guests and the Latham's daughter Harriet went aboard. We traveled under power down the East River and around Brooklyn to Gravesend Bay, the rendezvous for the ships. We then sailed out to the lower bay to meet a number of the ships as they came in from Bermuda. There was a brisk breeze blowing, and it was quite a thrilling experience to see the old-timers come in under full sail and then watch the youngsters on board furl sail. . . . Over the summer we have accumulated a number of news clippings concerning our classmates. Two of these related to the activities of **Lawrence Anderson**, who, as many of you know, is chairman of the Department of Architecture at M.I.T. Professor Anderson coordinated the activities of five architectural firms retained to collaborate on the design of the academic and student service buildings for the new campus of the Rochester Institute of Technology (enrollment 9,200). He also served with

Dean Belluschi on the jury that considered the competitive designs submitted for the Boston Architectural Center. . . . **Jarvis Wilson** has been elected vice-president in charge of operations of the Rochester Telephone Company, and **Bob Poisson** has been appointed director of marketing of Borg Fabrics, a division of Amphenol-Borg Electronics Corporation.

**Sidney Kaye**, who is president of Suffolk Grocery Company, is exceptionally active in extra-curricular activities. He is trustee of the Beth Israel and Jewish Memorial Hospitals, president of the Parker Hill Medical Center, fellow of Brandeis University, chairman of the Emerson College Advisory Council, and director of the Commonwealth National Bank. Perhaps of greatest interest, however, is the generous contribution he is making to both M.I.T. and international relations by putting foreign students through the Institute. So far six of his protégés have earned doctorates and a seventh (from Iran) is starting this year. The Kaye's younger daughter, Barbara, is a writer now living in Mallorca. Their older daughter, Sylvia, is married to a doctor who is a professor of radiology at University Hospital in Ibadan, Nigeria, where the Kayes were planning a visit at the time Sidney wrote. . . . **Hal Spaans**, whose move to the Philadelphia office of Bell Telephone Company of Pennsylvania was reported in the July, 1962, notes, is supervising instruction and teaching in the company's Engineering School. In the course of his work he has "become a convert to the creed of continuing education." He stresses the importance of keeping "pace with new methods, new concepts being made available to industry" and suggests that this idea should be sold to undergraduates by the colleges. The Spaans' son David graduated as a civil engineer from the University of Mississippi and is now engineering officer on the 'U.S.S. Paul Revere' in the Pacific. Daughter Judith is in high school. Hal reports having recently seen **Jack Vennard**, who is professor of fluid mechanics at Stanford; **Hank Halberg**, who is with the Coast and Geodetic Survey in Little Rock, Ark., and who, as well as his wife Edith, is an expert bird watcher; and **Bob Foster**, who is "easing out of active participation in his consulting firm in Concord, N.H."

**Bill Spahr** is manager of budget and costs for Metropolitan Life Insurance Company in New York. The Spahrs live in Smithtown, L.I., with the younger two of their three children, Lucia and Jonathan. Daughter Candace attends Endicott Junior College. Bill reports that his golf game has been deteriorating lately. . . . Last spring turned out to be a rather lethal time for the Class of '30. We have at hand reports that five of our classmates died within a three-month period. **Richard T. (Dick) Barnes** on April 27, **Gilbert L. Cox** on May 6, **Biagio (Dan) D'Antoni** on May 18, **William Caffey** on May 30, and **Carl J. Ellsworth** on July 26. The last report at hand concerning Dick is about four years old and indicates that he was a manufacturers' agent serving the pulp and paper industry and lived in Burlingame, Calif., with his wife Evelyn and their son, who would now be about



21. . . . The notice concerning **Gil Cox** indicates only that he died as the result of a fire in his home. . . . At the request of Dan's daughter Jane, **Joe Leininger**, '34, forwarded a clipping which reveals that Dan was assistant to the president of Standard Fruit and Steamship Company in New Orleans, as well as a director and vice-president of Standard Fruit Company. He died in Long Beach, Calif., during a business trip. Dan maintained a continuing interest in M.I.T. after graduation and was for many years secretary of the M.I.T. Club of New Orleans. In addition to daughter Jane, he is survived by three sons, the Reverend **Blaise D'Antoni** of Shreveport, James and John of New Orleans, both of his parents, and two grandchildren. . . . My three-year old report on **Carl Ellsworth** mentioned the fact that he had had two coronaries in the spring of 1961. He was manager of office utilities at the Plainville, Conn., plant of General Electric and lived in West Hartford with his wife **Dorothea** and a son **Carl, Jr.**, who would now be about 22.—**Gordon K. Lister**, Secretary, 530 Fifth Avenue, New York 36, N.Y.; Assistant Secretaries: **Charles T. Abbott**, 26 Richard Road, Lexington 73, Mass.; **Louise Hall**, Box 6636, College Station, Durham, N.C.; **Ralph W. Peters**, 16 Whitestone Lane, Rochester 18, N.Y.

# '31

Via ham radio, **John Elting** reports that he is fine and now has five children and two grandchildren. Two of the children are in high school, one in college, one is teaching school and the other is married. It was good to hear from John after about 25 years and learn that he is well and has such a fine family. His address is 4632 Carmel Vista, Charlotte, N.C. . . . In a recent issue of I.E.E.E. Transactions on Education, **Gordon Brown** suggested a formal program of updating and reorienting the skills of engineers who graduated in the 1940's as one approach to closing the engineering gap. In another publication Gordon mentioned the following two great movements now gaining momentum in American education, namely, "humanizing the scientist" and "simonizing the humanist." . . . Congratulations to **Phil Donely**, Chief of Flight Mechanics and Technology Division, Langley Research Center, NASA, on being selected as winner of the 1964 Laura Taber Barbour Air Safety Award. Phil was cited for his "diverse and unique contributions to air safety during his service of over 30 years with the NACA and NASA (which) have made him an internationally recognized authority in the areas of aircraft loads, operating problems and airworthiness requirements." . . . **Elmer Hughes**, a management consultant, broke into print recently with an article on "Fringe Benefits: Destructive or Fulfilling?" which appeared in the February issue of *Personnel Journal*. Elmer lives in Syracuse. . . . An article in *Humble Oilways* for March, 1964, mentions that 17 M.I.T. men work for Humble, including our

classmate **J. K. Jamieson**, Humble's president. . . . While reading the New York Herald Tribune recently, **Dick Kropf's** manly visage suddenly appeared with an article on the outlook for Belding Hemingway Company, of which Dick is president. He was predicting great things for their chemical division. . . . **Chuck Norris** also highlighted the need for continuing our education in an article entitled "Continuing Education—A Continuing Problem" which appeared in the University of Washington Publication, *The Trend in Engineering*.

With sorrow, we report the death of **Dr. B. John Kiniry** on January 21, 1963. . . . New addresses include **Fredrick E. Brooks, Jr.**, 205 St. James Avenue, Springfield, Mass.; **Miss Margaret E. Carroll**, 2330-38th Street, St. Petersburg, Fla.; **Daniel A. B. Cook**, Old Bedford Road, RFD #2, Lincoln, Mass.; **Stewart M. Davis**, Innstrabe 16, 8 Munich 27, Germany; **Chauncey J. Hamlin, Jr.**, 534 Palmetto Drive, Pasadena, Calif.; **Colonel Harry D. Kamy**, Broadwin Apartments, 1312 East Broad Street, Columbus 5, Ohio; **Ernest B. Whitworth**, 1259 Waverly Place, Elizabeth, N.J. 07208; **Arthur K. Wing, Jr.**, RFD, Riegelsville, Pa. 18077; and **Thomas C. Wright**, 121 Clifton Avenue, Minneapolis 3, Minn.—**Edwin S. Worden**, Secretary, 35 Minute Man Hill, Westport, Conn.; **Gordon A. Speedie**, Assistant Secretary, 90 Falmouth Road, Arlington 74, Mass.

# '32

A follow-up of the address change of **Ralph D. Patch**, Course X-A, gives us the added information that Ralph has been elected to the board of directors of Esso Standard Italiana, an affiliate of Standard Oil Company of New Jersey, and was appointed manager of manufacturing there earlier this year. . . . The American Society for Quality Control has honored **Philip Reiter**, Course VI, by election to rank of fellow. Philip is manager of corporate quality assurance at the Aerojet General Corporation, Glendale, Calif. He was previously chief of the Quality Assurance Engineering Division, U. S. Army Signal Agency. . . . **James J. Robson**, Course II, director of tire development for Firestone Tire and Rubber Company, Akron, Ohio, in an interview in "Auto-products," March, 1964, gave interesting answers to the questions we all ask about our tires. Total elimination of our spare is not in the cards, and present nylons are not solving the flat-spotting problem.

In the news as a Metallurgical Society director we have a career summary of **Dr. Oscar T. Marzke**, who received his Sc.D. at M.I.T. in 1932. From 1933-1946, Oscar was with American Steel and Wire Division of U. S. Steel, was associated with U. S. Naval Research Laboratory from 1946-1957, and since then has been vice-president, fundamental research, with U. S. Steel at Pittsburgh. . . . A bit of news of the family of **Gerald M. Davis**, Course X, who lives in Rahway, N.J.—son Robert graduated in June from St. An-

selm's College in Manchester and will enter graduate school at the University of New Hampshire to major in zoology. Daughter **Carol** is a graduate nurse, and younger daughter **Janet** is still in school. . . . A notice of the death of **Mrs. Agnes Elizabeth**, wife of **C. Oliver Morfit**, Course X, of Village Green, N.J., has been sent to us. Mrs. Morfit died on June 27, 1964, leaving besides her husband, two sons and two daughters.—**Elwood W. Schafer**, Secretary, Room 10-318, M.I.T., Cambridge 39, Mass.

# '33

We are starting off another Review year, and although there is usually plenty of material from press clippings and releases, there is never enough from personal sources. We have a clipping telling us that **Dick Payzant** has been awarded the Army's Decoration for Meritorious Civilian Service. He was recognized for his outstanding professional ability as deputy area engineer in the construction of missile sites at Davis Monthan Air Force Base at Tucson, Ariz. Dick is presently located at Merritt (Moon Shot) Island, Fla., where he is resident engineer for the construction of the vertical assembly building which will house the moon rocket, and will be the largest building in the world. The award also recognized his work on the Titan II missile sites. Our sincere congratulations, Dick, and let us hear from you personally. . . . Our own **Morris Cohen** took part in the Industry-Education Conference on metallurgical education at Carnegie Tech in April. Morris acted as chairman of a panel entitled "Engineering Design in a Metallurgical Engineering Curriculum."

Early in May, **Rodney Chipp** was elected chairman of a chapter, of the Institute of Electrical and Electronic Engineers. Best of luck, Rodney, and more work for you! . . . At the same time, a note from **Ed Goodridge** told us that Rod "will have to miss the Regional Class Meeting at New London because Bea is director of the first International Conference of Women Scientists and Engineers." What a family! . . . **Bob Winters** delivered the commencement address at St. Lawrence University, on which occasion he was awarded an honorary doctor of laws degree—his third honorary degree, no less! . . . Captain **Fred Aldridge** made news in the Pittsfield, Mass., Berkshire Eagle, the home of his parents. Fred has retired from the U.S. Public Health Service after many years of work throughout the world for the Department of Sanitation. Fred is assuming a position as sanitary engineer and director of sanitation for Seattle and King County, Washington. Good for you, Fred, and how about some personal news? . . . A short item from the *Winipeg Free Press* concerns **Stewart Hungerford**, a native of that city, who has been appointed western representative of DuPont of Canada. Stewart is a past president of the Technical Federation of Textiles of Canada. Great work Stew,

and how about a note from you, too?

A very enterprising classmate, **Martin Levine**, and **Harold Goodheim**, '39, came up with a new idea in merchandising; at least the idea was new to the reporter from the Pittsfield (Mass.) Eagle. They have set up a store in Pittsfield featuring health and beauty aids, candies, tobaccos, patent and non-prescription medicines and vitamins at discount prices. What happened next stirs my interest because if there is anything I like better than a controversy, it must be two of them. Pharmaceutical wholesalers are threatening suit for unfair trade practices; Levine and Goodheim, on the other hand, are challenging the state's Fair Trade Laws. The article contains much more information but space prohibits telling the whole story. . . . Another short item, about **Alex Minkus**, came from the Hartford (Conn.) Courant. Alex is deputy manager of the Metropolitan District Commission and has just been elected president of the Connecticut Waterworks Association. Alex has been with the MDC since 1935. . . . At long last we have heard from **Don Fink**. Don's name came up in a biographical sketch from a Dayton, Ohio, paper, where he appeared as a luncheon speaker. Don was on the staff of the Geology and Electrical Engineering Departments at M.I.T. before going into electronics. He received his master's from Columbia in 1942 and was with the Radiation Lab at M.I.T.; then during the war he joined the office of the Secretary of War and worked with the Loran installations throughout the world. Later he was editor-in-chief of Electronics magazine. In 1948, Don became chairman of the I.R.E. Television System Committee and was on the Senate Advisory Committee for Color Television. Starting in 1949, he spent three years with the State Department Conferences on Television in Geneva, Zurich and London. During 1956-1957 he was with Philco as editor of the Proceedings of the I.R.E.; he became president of the Radio Engineers in 1958, was appointed vice-president in charge of research for Philco in 1961. He has been a member of the Army Scientific Advisory Board since 1957, and is the author of books too numerous to mention. In January, 1963, Don became general manager of the I.E.E.E., of which he is also a fellow. As general manager, Don heads the staff, serving 150,000 members, and is responsible for the publication of 35 technical journals. There seems to be no substitute for brains, ambition and willingness to work! Incidentally, a picture accompanied the article, and Don still looks like Don.

Word now comes that the Cape Town-er, **Athelstan Spilhaus**, Dean of the Institute of Technology of the University of Minnesota, has been elected to the Board of Directors of Gould-National Batteries, Inc. . . . Now for some news from personal sources! The informal reunion of the class in New London, Conn., in June brought out 14 for dinner Saturday evening, and a few more showed up the next day, including **Dayt Clewell** and his wife. At dinner was a group of

old reliables, as follows: **Bill Bauer** all the way from Philadelphia; **Ellis Littman**, all the way from St. Louis; **Bob and Mrs. Winters**, all the way from Labrador(?); **Ed and Mrs. Goodridge**, Garby and Mrs. Garbarino. **Clarence Westaway** and **Bill Brothwell**, **Chuck Fulkerson**, **Leona and Yours Truly Henderson**. We would have liked to have had more, but it was a first try and the weather was against us—we had rain and fog for two days. To those who did not or could not make it, please allow me to assure you that we had a splendid time. President **Goodridge** was so pleased with the affair that he suggested we get in touch with Vice-president **Cal Mohr** to set up a similar meeting in Chicago next spring. . . . The next day was Alumni Day, and many of us went up to Cambridge. Those at the 1933 table were **Bill and Mrs. Andrews**, **Ed Atkinson**, **Bill Bauer**, **Tom and Mrs. Galvin**, **Bob Gammons**, **Ben Liberfarb**, **John and Mrs. Long**, **Dick and Mrs. Morse**, **Irving and Mrs. Schell**, **Gene and Mrs. Sullivan**, **Sam and Mrs. Wall**, **Clarence Westaway**, **Bob and Mrs. Winters**, **Ferd and Mrs. Johnson**, **Dick Zimpel** and the **Hendersons**. As a class we had a rather good turnout. For the second year in a row, rain drove the festivities into the Armory for dinner.

From our ever hardworking and faithful Vice-president **Jim Turner**, we have received a note in reply to one of mine; we discussed some ways of getting The Review to widows of classmates. I have had several letters from widows who miss The Review once it stops coming. **Jim** also mentioned the **Bob Kimball Memorial Scholarship Fund** of the Class, to which all funds given to the Alumni Fund this year and next will be credited. **Jim** mentioned that **Alvah Raymond** passed away on May 2. . . . Since the July issue, word has reached me of the death of **Dr. Nicholas Constan** of Beirut, Lebanon. Also, **Dr. Henry F. Mace** of Menands, N.Y., **Miss Maude Gardner** of Washington, D.C., and **H. Tyson Lykes, Jr.** of Palm Beach, Fla., have passed on. To the loved ones of these classmates we extend our most sincere sympathy. We also suggest that if there is anything that a class secretary can do for the widows or children, please let me know.

Through **Ed Goodridge**, we hear from **Ed Simpson**, who regrets being unable to get to the informal reunion because of his daughter's graduation from Radcliffe. Following her graduation **Beryl** took a trip to Ecuador; she surely must have had some compelling reason for going to Ecuador in June and, privately, I would like to hear from **Ed** what it was. I have been in Quito in June, and in several other months; that town has an unvarying climate—it is always hot, although **Guayaquil** is worse. . . . Perseverance pays off, as witness a two-page letter from **Mal Mayer**, our big brewery equipment man and world traveler. **Mal** wishes to correct a note on his trip last spring. It was not to Africa, but to New Zealand, Australia, Southeast Asia, India, England and Germany. However, last winter **Mal** did visit 22 countries in Africa. **Mal's** descriptions of the climates and living conditions in these places

were masterful. Back at home in August, he told us that while cruising in the North Channel, Upper Lake Huron, he ran into **Herb Bremner** of Framingham, Mass., who was cruising with another M.I.T. man, **Monte Ferar**, '32, on the latter's sloop 'Aeolus' Gosh, **Mal**, that bit of cruising is not too hard to take—Tobermory, Little Current, et al. I have cruised those waters, plenty. I remember one time catching a commercial fisherman hauling out large lake trout at a spot out of sight of land, right around there. We pulled alongside him, and then set the motors at 1800 and timed ourselves to a landfall, then reversed it and actually found the shallow place (only 30 fathoms) where those trout come from. I could not find it now, but we had some real good trout fishing that time, and several more. **Mal** avers that he will become a member of the Grandfathers' Club before year's end. His older daughter is married to a professor at **McMasters** in Hamilton, Ontario. And **Mal** said he might drop in to see us at Fort Rock some time in September, as he was going to his summer cottage in Maine. We will let you know in a later issue if he did.

Now comes **Ol' Cal Mohr** again. He mentions **Mal Mayer**, but then, so do I. **Cal** has a couple of bits of negative information. **Andy Regan** was on vacation when **Cal** was in Tennessee. **Bob Timbie** was and is always out when **Cal** telephones Chemstrand. (Is that in Pensacola?) It seems that **Walt Skees**, of Bahama fame, went to Europe this summer, and did I meet him? Unfortunately, no, but heck, there were quite a few folks over there. The rest of **Cal's** letter is composed of a few requests, some comments, and miscellaneous. Thanks, **Cal**. . . . I had a letter a day or so ago from **Goodridge**, addressed to Fort Farm-on-the-Rocks, and I got it!

**Goodridge** sent me a handwritten letter from **Stan Walters**, another New Hampshire (East Sullivan). I can read part of it. The letter is mostly personal to **Ed**, but it does contain a few useful items. He was surprised to get a telephone call from **Steve Avakian**, and it turned out to be our good Colonel **Steve**. **Stan** should read The Review. A year or so ago, I read that **Steve** was basking in the shower of praise and laudatory remarks made about his daughter who had been honored at the Institute. (It may have been a son, but I stick to the daughter.) It appears that **Stan** and **Steve** got together in June at some Army meeting or other at the Faculty Club. **Steve** is head of an eastern office of the Aerospace Corporation. My question: "Steve, why did you not let me in on all this. I hate to get this stuff secondhand." . . . I have a nice note from **Harry Summer**, Evanston, Ill., who "doesn't get much chance to match stories with members of the Grandfathers' Club." **Harry**, above you will note that the opportunity will be knocking soon in Chicago. **Harry** asks that I pass on his best to **Ed Goodridge** and **George Henning**. He still remembers with pleasure the New York M.I.T. Club meetings. Well, **Harry**, they have changed the procedure, but we still have meetings. **Harry** says that he is still



with Lerner Shops in merchandise engineering of children's clothing sales. (I know I have that messed up!) Never mind, Harry, I get letters with worse handwriting than yours.

From Ol' San Antone comes a good letter from Dr. William (Willie) Harper. Bill is up to his neck in chiropractic business; he says that he has been out of the Texas Chiropractic College for two years and is in the process of starting a new chiropractic college. How do you like that? You are a professor at the Institute, and you get not to like it so well, so you start another one. It takes all kinds, it appears, and Bill can do it! We were sorry to hear that he had recently lost both his father and mother, both of whom I knew as a student. And, much more pleasantly, his associate, Bobby Rogers, is now his wife. Our congratulations, Bill and Bobby. William is getting real ambitious, not that he didn't always have a little. He has a new book in the hands of the publishers, entitled, "Anything Can Cause Anything." Now there is a title for you. One might put about anything under it, and no fooling. Leave it to Willie, he will put something under it. By the way, I do not have the date of publication, but Bill says that any classmate who wants a signed complimentary copy, can send the request to the secretary. He must have meant me. I think that the offer is very kind. Thanks for the letter, Bill. You may encourage someone else to loosen up. Don't forget the Kimball Fund.

Bob Forbes waited until after May 3, 1964, to write me about another grandchild, making four now so that he can call Bob Smith a piker with only three. That's the spirit, Bob (either one). This Grandfathers' Club business was a happy inspiration. Don't forget—no meetings, no dues, no nothing, just talk. Bob (Forbes), you are now enrolled. Bob is editor and writer for TVA reports, on the Division of Water Control, working mainly with flood control. I will have to quote the last paragraph, as it can not be paraphrased without losing something. He says, "If you want something more personal, I have been divorced since April, 1962, and am proceeding diligently in accordance with my outspoken intent not to live alone the rest of my life." Do I detect a note of smug satisfaction in that? Mebbe! He says that he is proceeding, but as of May 11, 1964, he has not proceeded far on whatever course he meant. Be sure and let us in on any new developments, Bob. I will even quote you if you insist. And thanks for the letter.—Warren J. Henderson, Secretary, Fort Rock Farm, Exeter, N.H.

# '34

The 30th Reunion is now history. It was held at the lovely Wychmere Harbor Club at Harwichport, Mass., on June 12, 13 and 14. Friday and Sunday the Cape favored us with its finest weather, but Saturday rain intervened to save many of the group from sore muscles, broken

limbs, or even worse, as planned athletic events (except golf) had to be cancelled. Many of the wives shopped the wide array of interesting gift and antique shops within an hour's drive of the club, while husbands sat around and caught up on their reminiscing, aided by certain chemical reactions which Professors Davis and Hunsaker would be glad to learn the group had mastered so well. All sections of the United States and Canada were represented in the group of 81 classmates and 70 wives. There were several children present (they ran around so fast I couldn't count them).

Hank Backenstoss and Nicole came all the way from Saudi Arabia, Eric and Mora Isbister from Florida, and Gordon and Jane Wade from San Francisco. New England and the midwest were well represented. It should make many of you who live nearer feel a little sad to have missed this unique event. Festivities started Friday night with the arrival of most of the crowd. A fine dinner was served, and after dinner Hank Backenstoss showed a series of color slides of Lebanon. During the evening Paul Wing played the recorder and harmonica while several of the fellows played the piano.

Saturday there was a golf tournament which ended in a tie between Charlie Sheehan and Lou Frank. Since Charlie had won the event in 1959, he graciously yielded the trophy to Lou. Saturday evening there was another excellent dinner with full attendance. Again, old acquaintances were renewed and time rolled backwards—a little bit. Phil Kron acted as toastmaster and showed an excellent color comedy movie on the history of photography. Al D'Arcey showed color scenes from previous reunions and Alumni Days. Phil Kron conducted the lottery to award the gifts which had been brought by some of the group. Hank Backenstoss' seven-year-old daughter drew the numbers, so honesty prevailed. While all this was going on, at least three amateur photographers were busily at work attempting to shoot the goings on. Johnny Westfall appeared in a lovely red sport coat, and was shot repeatedly by the shutter bugs.

The group then quieted down and was entertained by Nicole Backenstoss, Sylvia Becker, Frankie Frank and Bernice Gahm in a running commentary on the doings of 1934 to the tune of "Thanks for the Memories." This was written by the singers, and assisted by Bea Krim, Muriel Wilson, Claire Wing, Jerry Stein and Kae Johnson. The words of the song follow.

"Thanks for the memory/If you'll bear with us a moment,/Your ladies hope that this/Quick review will give to you/A chance to reminisce/Please lend us your ear.

"Thanks for the memory/Do you remember—in the days of yore/When seas were made for sailing,/Not sounding on their floor./For the Class of '34./Remember when Compton said "Lights out"/The time was a quarter of two/You got the weather from Rideout/You were drinking brew that was 3.2.

"Thanks for the memory/In those days life was simple/The big moon had a face/And always went with romance and not

with outer space/For the Class of '34./In those days when money came harder/And the subject of marriage was moot/Tho there wasn't much food in the larder/You got a two-pants suit with a vest to boot.

"Thanks for the memory/At that time boys were pranksters,/and heaven only knows/You couldn't call them gangsters/When they cut the fire hose/Back then in '34./Cab Calloway sang Minnie the Moocher/We sang "Buddy, Can you spare a dime"/Tho it looked like a hazardous future,/Mae West said "Come up and see me some time."

"Thanks for the memory/In those days the wind tunnel/Was simply a breeze/And every little breeze seems to whisper Louise/In the days of '34./Let's have a moment of silence/For a building that's no longer there/Where you boys got your sex education/In Scollay Square, where the girls were bare.

"So, thanks for your memories/Of 30 years now past/You've now grown up at last/The house, the grass, the kids, the car/It's all been such a blast/So thank you so much!

Each member of the class was presented with a 30th Reunion plaque and a letter opener from Lebanon procured by Hank Backenstoss. Next morning there were reports of a 4 A.M. poker game, but your reporter failed to gather any details. Many of those present spoke about absent ones, particularly Ed Sylvestor, Harry Egan, Rannie Thompson, Phil Daniel, and many more. Please drop us a line boys. Sunday morning a formal business meeting was held, and it was decided to return to Wychmere in 1969 for our 35th Reunion. The following slate of officers was elected: Carl H. Wilson, President; W. Leslie Doten, Jr., Treasurer; Vice-president: New England, Samuel A. Groves; East, James P. Eder; Central, Harold E. Thayer; West, Edgar B. Chiswell, Jr.; secretaries were also elected, and will be listed at the end of this report.

Bob Grosjean is far out in the Pacific for General Foods. . . . Charlie Lucke was in San Francisco giving away his daughter in marriage—later he and Ed Chiswell toasted the class in proper manner. . . . Butch Patch and Helen were in Scandanavia. Butch will be happy to answer any questions regarding "live water." . . . Fran Jenkins has recently been appointed vice-president of purchasing of Sprague Electric Company. . . . Wilfred MacDonnell was elected president of Kelsey Hayes Company. . . . Henry Andrews has been appointed head of the University of Connecticut's Department of Botany. Henry is one of the nation's foremost authorities on fossil plants. . . . Karl Gardner has recently returned to the East Coast from California, and now resides in Westport, Conn. His son entered M.I.T. with the freshman class in September.

Before closing, I want to take a line or two to reflect the opinions of many of the group. The spirit of camaraderie and congeniality of the group is remarkably good, and the wives all get along wonderfully well. We are all proud to be a part of the Class of '34.—Charles M. Parker, Secretary, 3 William Street, Nor-



walk, Conn.; Other Secretaries: **Norman B. Krim**, 15 Fox Lane, Newton Center 59, Mass.; **W. Olmstead Wright**, 1003 Howard Street, Wheaton, Ill.; **Kendrick H. Lippitt**, 3782 Putter Drive, Chula Vista, Calif.

## '35

Welcome back after what I hope was a most pleasant summer. We had a small representation on Alumni Day last June including Leo Beckwith, Chet Bond and Mr. and Mrs. G. Peter Grant at the luncheon and Mr. and Mrs. Dwight Merrill joined us at the banquet. One of **Pete Grant's** sons spent the summer working in California while the other attended Brown University. . . . The 4th Annual Class (Golf) Tournament is down to the semi-finals, and the full-handicap differences this year are making it tough for our low-handicap players. Ham Dow, Sid Grazi, Art Marquardt and Allan Mowatt are still holding on (it is pure coincidence that the two members of the golf committee are still in). Quarter finalists who didn't get by the next round included Les Brooks, Sam Brown, Paul Daley and Bill Barker. The eight others who started in June included Leo Beckwith, Henry Ogorzaly, John Kiker, Dick Bailey, Hal Bemis, Bob Forster, Bob Anderson and Gordon Scowcroft. In the course of promoting the golf tournament we generated a few interesting letters. Here is one from **Jack Colby**: "Congratulations on doing a magnificent job. I feel guilty every time I read The Review in that I certainly have not done my share in providing you with news. I spent some time in Washington, D.C., recently and had the opportunity to spend some time with **Dick Parli**, who was my freshman roommate. We had not seen each other in 29 years. Dick looked like a million dollars. He has a very attractive wife, Virginia; a girl who is a junior at the University of Kentucky; and a boy in high school. Dick is a successful architect and is the past president of the Washington Chapter of the American Institute of Architects. He also has a very successful business as an appraiser of real estate property. You should certainly get him into your golf league as he plays golf every Wednesday, plus the weekends, and I understand has a 12 handicap.

"With regard to myself, my family and I recently had a wonderful trip to Florida. My three boys, Priscilla and I rented a 32-foot Chris-Craft and cruised down the Keys. While I was doing this, **Jack Ballard**, Penelope and their three children were cruising on a sail boat in the Bahamas. As our older kids had to get back to school in the East before the end of our vacation, the two families joined together and Jack Ballard helped me pilot the boat from the Keys back up to Ft. Lauderdale. (This was written in May, 1964.) I am sorry that I cannot join the golf tournament but I had a little setback last fall and have to take it pretty easy for the next year." Many thanks for writing, Jack, and we all want to be sure you do take it easy—save up for our 30th!

**Wes Loomis** dropped a note in May,

too: "From the way things look at this point, it would be foolhardy for me to get involved in this summer's tournament. We have a merger pending July 1, and I can assure you that the majority of my time for the next several months will be spent on the West Coast securing our new acquisition. In other words my golf game this year will be very much on a hit and miss basis. My best to all." . . . **Bill Cross** stopped long enough to write: "I hope you will forgive this delay in responding to your notice about the Fourth Annual Class of 1935 Golf Tournament. My business travel continues to take me out of the country a great deal of the time, so I find with regret that it will just not be possible for me to play golf this year." We will look forward to seeing Wes and Bill at our 30th in June and catching up on the details. . . . **Hal Bemis** is a new vice-president of the Greater Philadelphia Chamber of Commerce and has been very busy, but let him tell it: "My treatment, by procrastination, of friends recently should qualify me for an hermitage. I can but give apologies and hope you and all will understand. The load of business, politics, etc., not to mention my three growing girls has been a hard one for a one-man operation. The enclosed paper describes one of the responsibilities which, in the last two years of lead-up, has been considerably time consuming and promises to continue in like vein. Not that I don't enjoy it all—I do! But something has to give in this instance, most of my erstwhile free time, especially for golf. My endeavors in the latter have now become pathetic. (I did manage a 94 last Saturday, the first time in a month I have broken the century mark!) Hope, however, springs eternal, and I appreciate your letting me try again in the Class Tournament. If I can plan anything for the future, I still want to play Pine Valley with you, although I haven't seen that course for a year."

**Sam Brown** and his wife Helen had a fine four-week trip to Europe with stops in France, Switzerland and Spain. Sam sent me his itinerary so I could keep him up to date in the golf tournament and wrote from Marbella, Spain, as follows: "Your letter was received at our previous stop, or perhaps it was back at Barcelona, but it certainly was very thoughtful and rates an answer. Thank you for including me in. I will telephone **Hank Ogorzaly** and perhaps have a round with him, since my first adversary is in Denver. I will surely get in two games around June 14, 20 and 21 and I will send you a card pronto. The course here is a doozie. Never have I seen such a thing and that includes Bel-Air, California and Mid-Ocean at Bermuda. Oh! They all have a hole or two to talk about but this course is long and narrow, and has 14 killer-diller holes. The first day I lost three balls, today only one. The caddies are just bag-toting kids, not trained at all as caddies, but only cost 90 cents (U.S.A.) for 18 holes, so one can't kick. Except for skipping nearby Torremolinos and hurrying here, we have followed our planned itinerary and have had a fine time. This Golf Hotel is on the beach, has a fresh water pool, the 18-hole golf course and more patios and terraces than needed for its maximum of about 200 guests. The cost for two persons per

day, including the greens fees which are mandatory whether or not one plays golf, and including three meals per day, is approximately \$16.60, and this includes the 'service and taxes' too. The only extras are coffee, tea, fruit juice, wine, beer, liquor and bottled water and rental of golf clubs at \$1.25 per day. . . . Time for a brief siesta-in-the-sun, then a dip in the pool, then a cold beer, then at 7:30 P.M. we will go to bathe and dress and think about a 'copatina' at 8:30 and dinner at 9:00—early for Spain."

**Henry King** has moved to Pittsburgh to head up a larger division and reports the work different and more interesting with greater responsibilities. . . . **Leo Beckwith** has appointed **Bill Abramowitz** as chairman of our 40th Reunion Gift, and you will hear more about this next June, too. . . . You have already received **Bob Forster's** first mailing on our 30th at the Chatham Bars Inn next June. Act now, while it is still fresh in your mind; we want you there. . . . Here is more proof that lightning strikes twice: my employers changed chief officers in June and in July decided the new product program on which I had been working would be phased out. So now I am starting a one-man consulting business in product development, marketing and business analysis in the mechanical and electromechanical fields. Business could be brisk (if people could make fast decisions) because I have about 12 product lines, mostly in the electronics industry, about which I am talking to a number of companies.—**Allan Q. Mowatt**, Secretary, 61 Beaumont Avenue, Newtonville 60, Mass.; Regional Secretaries: **Edward C. Edgar**, Kerry Lane, Chappaqua, N.Y., **Hal L. Bemis**, 510 Avonwood Road, Haverford, Pa.; **Edward J. Collins**, 904 Merchandise Mart, Chicago 54, Ill.; **Gerald C. Rich**, 105 Pasatiempo Drive, Santa Cruz, Calif.

## '36

The four-month period between the writing of notes for the July Review and this issue results in a considerable accumulation of news items. The Boston Herald on June 8 printed a picture of two members of the Simmons Class of 1938 with their newly graduated daughters: Mrs. **Edward L. Dashefsky** and Gloria and Mrs. Walter Wrigley, '34, and Lois. Four days later the Herald reported that **Bob Woodward** had added to his list of honors a doctorate in science from the University of Cambridge. . . . July 12 saw a report of the marriage of the **Fred Prahl's** son Joseph M. to Rena Wadt of Short Hills, N.J. . . . A letter from **Ollie Angevine** dated July 6 gave a new address (1667 Emery Road, East Aurora, N.Y. 14052) and the reason for it: "Last March you published a new address for me in the class notes but all that really happened was that the Post Office changed my rural route number. This time the address change is real, as you can see. I am now with American Precision Industries as manager of the Specialty Department. Our products at the moment are mostly electric wave filters. Business address is

77 Oleon Road, East Aurora." . . . **Dick Bryant** has been appointed plant engineer of the Granet Corporation of Framingham, Mass. The company manufactures a complete line of coated workgloves for industry and Dick is responsible for implementing expansion plans which will result in increased production facilities. . . . De Laval Turbine, Inc. has announced that **William Budd** has joined them as a marine engineer. He was formerly with the Bethlehem Steel Company.

Time marches inexorably on and our 30th Reunion gets closer and closer. The chairman is **Frank Berman**, and in a recent conversation he asked me to convey that he would be delighted to hear from any classmate who is willing to help with planning. His address: Dr. Frank R. Berman, Control Data Corporation, 730-3rd Avenue, New York, N.Y. 10017. It is not too early to start thinking about it, and many hands make light work, I hope the volunteers are many. Frank reports that he has helped to organize an advanced seminar on computers at the Alumni Center in New York. . . . At the recent Alumni Officers' Conference at the Institute I saw six other members of the class: Malcolm Blanchard, Harry Essley, Bill Garth, Mal Graves, Tony Hittl, and G. Elliott Robinson. The participants included members of the Educational Council, representatives of the Alumni Fund, and Class, Club, and Association Officers. The program was interesting and informative with all sorts of suggestions to help the secretary do a better job. Just wait until I put all that advice into practice.—**Alice H. Kimball**, Secretary, 20 Everett Avenue, Winchester, Mass. 01890.

## '37

Hi. Come fall and we are back in the reporting business. Hope you all had a wonderful summer. Now that the days are getting shorter, and Tech Review season is here, pull up your footstool, it is a good time to catch up on the news of our busy classmates. Not too many of us attended the Alumni Day, 1964, but those of us who could make it were: John Fellouris, Joe and Marion Heal, John Nugent, Phil and Ruth Peters, Curt Powell, Bob and Rose Thorson and Howard Webster. Congratulations are in order for **Phil Peters**, who was elected vice-president of the Alumni Association. . . . On July 7, Material Service, division of General Dynamics Corporation, announced the appointment of Colonel **Joseph A. Smedile**, as a vice-president. He is a veteran of 27 years as a commissioned officer in the Army Corps of Engineers. Joe served as Chicago District Army Engineer, and as senior advisor to Director of Staff, Inter-American Defense Board in Washington, D.C. He has also served on President Eisenhower's special Draper Committee to study the foreign aid program. Previous service took him to Central and South America, and to the Pacific from Guadalcanal to Japan, chiefly in construction activities. "Colonel Smedile brings with him extensive experience in planning, supervising and execut-

ing a vast variety of large construction projects, including air fields, navigation and flood control projects," said Irving Crown, Vice-chairman of Material Service. Smedile is an engineering graduate of M.I.T., and received a master's degree in civil engineering from the University of California. In addition, he was graduated from the Army War College, the Army Command and General Staff College, the Air Force Staff College, and the Army Comptroller School. He is a registered professional civil engineer and a member of the American Society of Civil Engineers. He is married to the former Martha Louise Durloo of Macon, Ga., and they have a 12-year-old son, Peter Gary.

**Dave Summerfield** sent a clipping about Joe Smedile, and wrote: "I am now chief engineer of Skil Corporation, second largest manufacturer of portable tools. Son Steve, 21, is in the Air Force and expects to be moved from Michigan to Puerto Rico in August. Son Gary, 19, will be a sophomore at the University of Tulsa this fall." . . . From The Post (Washington, D.C.), in an article entitled, "Improving Production Standards Through Better Management," this excerpt: "motivation is a deep subject about which many learned papers and books have been written. An excellent article by Professor **Leo B. Moore** of the Massachusetts Institute of Technology was published in the December, 1962, issue of The Post. You should read it periodically. It contains important fundamentals of understanding and handling people." . . . **Philip Bliss** was elected president of the Newton, Conn., Chapter of the American Field Service which participates in the AFS International Scholarship Program of student exchange. Bliss is employed as project engineer in charge of instrumentation and controls at the Canel Laboratory of Pratt and Whitney Division of United Aircraft Corporation. He has been a resident of Newton for 19 years, is active in the Church of Christ, Congregational, and was a member of the recent Charter Revision Commission.

**Dr. B. E. Bennison**, Ortho Research Foundation, recently spoke to the Ladies Night Meeting of the North Jersey Section's Raritan Valley Subsection on "Oral Contraceptives." After graduation from M.I.T., he entered Harvard Medical School and received his M.D. in 1941. At the National Institute of Health for seven years, he did basic laboratory research on malaria and later joined the National Cancer Institute to work on experimental animal tumors. A series of field assignments in tuberculosis control was followed by a year of post-graduate training leading to the M.P.H. degree in 1954 from the University of Pittsburgh. He then joined the Medical Research Division of the Esso Research and Engineering Company and became involved in a variety of medical and health problems of this international oil company. In 1960 he accepted his present position as assistant director of research at Ortho Pharmaceutical Corporation where he has had responsibility for the laboratory development and clinical investigation of contraceptive products.

Rear Admiral **Harry N. Wallin**, Civil

Engineer Corps, USN, was made deputy chief of naval material for management and organization on July 1, and now makes his home in Bellvue, Wash. Admiral Wallin has been district public works officer for the Fourteenth Naval District, with headquarters at Pearl Harbor, Hawaii, since July, 1962. In his new post he will be the principal staff assistant to Vice-Admiral Schoech, Chief of Naval Material. . . . **Evan Edwards** has been nominated for director of Eastman Kodak Company. He joined the company in 1948 and is now assistant director of the Film Services Division at Kodak Park. Earlier he was project engineer and was assistant director of engineering from 1953 to 1961, when he was appointed to his present position. His duties pertain to the use of films in cameras and related apparatus, and he maintains liaison between the film manufacturing organization and various company units engaged in development and manufacture of such equipment. Evan is a past president of the New York State Society of Professional Engineers; former chairman of the Rochester Section, American Society of Mechanical Engineers, a member of Tau Beta Pi, Sigma Xi, and the Institute of Electrical and Electronics Engineers.

**Paul Oppermann** recently resigned as executive director of the Northeastern Illinois Metropolitan Area Planning Commission and joined the faculty of M.I.T., and will also become a partner in a Boston area planning consultant firm. . . . From the Post (Bridgeport, Conn.), we read that **Newton H. Hoyt, Jr.**, Cos Cob, Conn., has been made treasurer of the Singer Company, at the company's headquarters in New York City. Newton joined the company in 1937 at its Elizabeth, N.J., factory. In 1946 he was transferred to the company's industrial products division and was made assistant secretary five years later. In 1960 he was appointed assistant treasurer and was transferred to Friden early this year. . . . From Charles E. Brokaw, Denver, Colo., Class of '22, we have received the sad news of the death of **David S. Whitaker**, as a result of an automobile accident. Mr. Brokaw wrote: "Dave and I were the only two M.I.T. Betas here in Denver. He was a stalwart of our M.I.T. Club, being active on our Scholarship Committee and other club doings. He was most successful in his career with Stearns-Roger Engineering here and had a very promising future. His classmates will be unhappy to learn of his death in your class notes. I am sorry to have to send such terrible news."

From **Norm Birch**: "No changes; same job, but more demanding (and interesting!) all the time. Eric, 21, Harvard, '63, quit M.I.T. Management Graduate School after first semester, is doing his National Guard service at Fort Dix, will start Harvard Business Administration Graduate School September, 1964. Alan, 18, graduated from Western Reserve Academy with high honors, will start at Harvard as freshman in September, 1964. A sad state for M.I.T. '37!" . . . From **Joseph M. Puffer**: "In the fall of 1962, my wife and I toured New Orleans and the southland. The summer of 1963 we visited San Francisco, the Pacific Northwest, and Alaska,



coming home via Jasper and Canada. The summer of 1964 we visited Mexico, Grand Canyon, Las Vegas, Nevada and the Southwest." . . . From **John B. Pitkin**: "Thank you for the birthday greeting. This year Marian and I will spend the day (Alumni Day) traveling to Moss, Norway, where we will celebrate with our older daughter who is married to a fine Norwegian and makes her home in Moss. Good luck." . . . From **Milton Karr**: "I am director of engineering-plate and mechanical, American Bridge Division, U.S. Steel." . . . From **Mort Nickerson**: "Recovering from cataract operation—left eye, prognosis good. Working for Goldwater."—**Robert H. Thorson**, Secretary, 506 Riverside Avenue, Medford, Mass.; **Professor S. Curtis Powell**, Assistant Secretary, Room 5-325, M.I.T., Cambridge, Mass.; **Jerome E. Salny**, Assistant Secretary, Egbert Hill, Morristown, N.J.

## '38

More conspicuous for our enthusiasm than for our numbers, a small group represented 1938 at Alumni Day last June. **Paul Black** reporting on our participation in the festivities, notes: "I was not able to attend the luncheon, but had enthusiastic reports on how well we were represented by Jack and Eileen Bethel, Haskell and Ina Gordon, Dick Henderson, Bob Johnson, Don and Phyl Severance, and Ed True. As you might guess, Ruth and I managed to get there in time for the cocktail party and dinner, when we also added **Tom Garber** to the group. Needless to say, we enjoyed Arthur Fiedler and the Pops and only wished there were more from the Class of '38 there. . . . I attended a recent open house at NASA's Langley Research Center," Paul also reported, "and found that **Charlie Donlan** is now the associate director. I only had a chance to chat with him for a few minutes. I also ran into **Bill Bender**, who is now director of research for the Martin Company. I have seen Bill off and on over the years since graduation and always enjoy every opportunity to chat with him. Perhaps I may see more of him in the next few years, since my daughter, Paula, will be attending the College of Notre Dame of Maryland in Baltimore. Ruth and I just spent a busy weekend commuting between graduations. Peter received his degree in meteorology from St. Louis University on Saturday, and Paula graduated from high school on Sunday. Peter, incidentally, received a pre-doctoral fellowship in atmospheric sciences from the University of Chicago. Needless to say, we are proud of how well he has done!"

Our own summer has been amazingly complex. One factor has been the introduction by Eastman of an instrumentation magnetic tape, which is being distributed by Consolidated Electrodynamics Corporation. Our film manufacturing organization has had a major responsibility in the product development and the manufacturing implementation. The activities before and after the July an-

nouncement of this venture, have brought me I am sure within 40,000 feet of nearly everyone in the class! At the same time when one is in transit up there, there are limited opportunities for visits or even conversation. Polly and I have, nevertheless, had some fleeting glimpses of the Boston metropolis because our oldest daughter Carolyn has just completed her first year at Pembroke in Providence. She has even reported for us some of the inner workings of M.I.T. today, since she spent one night in the new girls' dormitory, McCormick Hall, attended a few classes, and otherwise sampled the Institute atmosphere. (The verdicts: McCormick, fabulous; classes, like Brown; atmosphere, not as wild as many!) . . . Summer is the time (not New Year's) when class secretaries make resolves on how to be more efficient. It is also the time when all sorts of news items come up after months of hibernation. Scientific American carried an article by **Bruce Old** in December, 1963, (this is one of the magazines that I read carefully, but like last century's colonial Englishmen, I am always months behind the current issue!) "The Continuous Casting of Steel" is the subject explored by Bruce, with Leonard Gallagher, '54. Both authors are with A. D. Little, Bruce being senior vice-president. Continuous casting was brought to commercial development in Europe, but may now be taking hold in the United States. The feasibility has already been demonstrated for many specialty steels, and the problems of integration with U.S. mills and U.S. market requirements seem soluble. Bruce is also known to readers of *Technique Revisited* as the co-author of "The Game of Singles in Tennis," and "The Game of Doubles in Tennis!"

**Sol Kaufman** was honored last spring for his contributions to the Temple Reyim in Newton, Mass., and his continuing service to the Jewish community. Sol headed the design committee in 1957-1958 for the Temple Reyim, a building that won the top honors for religious architecture in the 1960 Boston Arts Festival. Accordingly, he was made chairman of the design committee for the Temple religious school and honored during the groundbreaking last January at the Annual Award Breakfast of the Temple Reyim Brotherhood. Sol applied his IV-A background to naval damage control during the war, and was commended for his teaching of naval architecture. Since then he has been president of Kaufman Company, Inc., distributors of tools and industrial hardware. . . . **John C. Kinnear, Jr.**, general manager of Kennecott's western mining divisions, has been named a member of the M.I.T. Educational Council in Salt Lake. . . . **Lyndon Crawford**, after nine years with General Dynamics, has joined the Center for Naval Analyses (CNA) of Arlington, Washington, and Cambridge. Our indefatigable executive vice-president of the Alumni Association **Don Severance** reported from Minneapolis that he met Richard Ewert, '37, who is president of Sewall Gear Manufacturing Company of St. Paul. While Don was out of town on his perennial search for volunteers (have

you come forward recently?) Phyl moved the family homestead from Audubon to Hampshire Road in Wellesley Hills.

**Professor Eric Reissner** participated in the A.S.C.E. Engineering Mechanics Division Conference at M.I.T. in April, heading the elasticity section. His tutorial, general lecture was entitled "Aspects of Thin Shell Behavior." He had already submitted a paper documenting the extension of his researches in this field, for publication in the A.S.M.E. Journal, "On Asymptotic Expansions for Circular Cylindrical Shells." These discussions generated so many questions at the conference, that to quote from Civil Engineering, "Professor Baron was obliged to request that questions be saved for the cocktail party," where we assume thin circular cylindrical shells were perused with great thoroughness. . . . Major General **Austin Betts**, who had been serving as director of A.E.C.'s Division of Military Applications, has been assigned to the Pentagon as special assistant to the Chief of Research and Development, Department of the Army. Austin's research and development assignments read like an almanac version of the age: 1945-1946, AEC Los Alamos Scientific Laboratory; 1947-1948, Associate Director, Los Alamos Scientific Laboratory; 1949-1952, Chief, Atomic Energy Branch, Research and Development Division, G-4; 1952-1954, executive to Chief of Research and Development; 1956, Army Ballistic Missile Agency, Huntsville; 1956-1959, director of guided missiles, Office of the Secretary of Defense; 1959, military assistant to the director of the Office of Defense Research and Engineering; 1959-61, director, Advanced Research Project Agency, Department of Defense!

A few months ago we reported **Frank Atwater's** promotion to vice-president of operations at Fafnir Bearing. Before the article even appeared in print, he was elected a director! It was just such philosophical items as this I would like to have discussed with Frank, but he made his last swing through Rochester when I was out of town. Frank—and everyone else—call again if you are near the Kodak City, and we will quickly slip into a pair of the 1938 straw hats. . . . We are sorry to note the death of **Charles P. Haley** in March. Charles had been representative in the New Hampshire State Legislature for eight years, and was a prominent Republican. He had recently been elected a delegate to the Constitutional Convention. He had come to Keene Washing Products Company after graduation, served in Europe, and then returned to Kingsbury Machine Tool Corporation. Later he organized Keene Grinders, Inc., which he later sold. He is survived by his wife Marian.—**Frederick J. Kolb, Jr.**, Secretary, 211 Oakridge Drive, Rochester 12, N.Y.

## '39

So many biographical notes collected during the summer months that news of our 25th Reunion must be condensed,



and continued next month if space permits. An excellent time was enjoyed by all, including more than 100 alumni plus many more than that number of wives and children. **George Beesley** chaired the Reunion Committee, capably aided by **Bob Casselman**, **Eli Dannenberg**, **Fred Grant**, **Ernie Kaswell**, **Al Rugo**, **Bob Saunders**, **Don Scully**, **Seymour Sheinkopf**, and **Aaron White**. For those classmates who did not attend, a magnificent preview of the reunion, including biographical sketches and personal photographs, was published by **Aaron White** and his committee. "The 39er" is a 193-page soft cover book, fully a half inch thick. 315 alumni had returned their data sheets to Aaron by deadline time, and this collection of histories makes excellent reading, as all reunioners can attest. A few copies remain, at a modest price. Just contact **Aaron White**, 177 Varick Road, Waban, Mass. 02168.

At the Class Meeting held during reunion, **Bill Wingard** regretfully declined to extend his 25-year term as class president. His decision was prompted principally by the challenge of having relocated a few months ago from Boston with **United Carr-Fastener**, to Baltimore to begin his own business doing creative and inventive machine shop work. Best of luck, **Bill**, in your new venture, and our sincere thanks for those dedicated years as class president, especially in writing those frequent and successful Alumni Fund letters to all '39ers! By acclaim, and by virtue of having helped plan such an excellent reunion, **George Beesley** was elected president, and we are all grateful that he consented to serve. Re-elected on the unanimous slate were **Ernie Kaswell**, Treasurer, and **Oz Stewart**, Secretary. **Seymour Sheinkopf** and I, whose appointments are made by the Alumni Fund Director, will also continue to serve as Co-Class Agents.

Now for some of the current notes. **John S. Hamilton** has been appointed manager of trade relations for Aluminum Company of America. John joined Alcoa in 1939 and has held management positions in foil, sheet and plate sales, and prior to this new assignment, was manager of packaging industry sales. . . . **Richard P. Feynman** has written a new book, "The Feynman Lectures in Physics," published by Addison Wesley Publishing Company. The Physics Teacher in its March, 1964, issue, reviewed one of the opening chapters, entitled "The Relation of Physics To Other Sciences." The book is based upon Dick's lectures at the California Institute of Technology. The magazine article introduces Dr. Feynman with an engaging photo of him playing the bongo drums! . . . Dr. **Clifford Frondel**, Harvard Professor of Mineralogy, was recently awarded the Distinguished Achievement Medal of the Colorado School of Mines. Dr. Frondel has been a member of the Harvard Faculty since 1937, (receiving his doctorate from M.I.T. in 1939) except for wartime years spent in research as a senior physicist of the War Department and as director of research for the Reeves Sound Laboratories of New York City.

**Samuel A. Bjorkman** has been transferred from Monsanto Chemical Com-

pany to Chemstrand, and is a senior engineer in the design section. . . . **John W. Pocock**, President of Booz, Allen Applied Research, Inc., has been named a director of Booz, Allen and Hamilton, nationwide management consultants. Mr. Pocock's subsidiary is a scientific, technical, and product development group. . . . **Charles S. Mercer**, Vice-president of Morgan Construction Company, Worcester, Mass., has moved from Morgoil Bearings to the Rolling Mills Division of the company. He had been vice-president of Morgoil Bearings since 1962 and manager of the department since 1954. Prior to his association with Morgan in 1952, he was with Alcoa in engineering, operating, and sales capacities.—**Oswald Stewart** Secretary, 3395 Green Meadow Circle, Bethlehem, Pa. 18017.

## '40

Save the dates: June 12-14, 1965, for our 25th Reunion! . . . The answers to the reunion questionnaire have indeed been gratifying. Already your secretary has received over 140 replies. This compares favorably with a total number of replies of 118 received by the Class of '43 at their 20th Reunion. . . . It is with regret that I must report the death of three former classmates. **Robert L. Arnold**, who was with us during the first term of freshman year in Courses VI and X, died in 1963; **John A. La Rochelle** of Course VI died August 28, 1960. . . . **Paul L. E. Alberti**, who was graduated with us in Course XVI, died on May 18, 1964. Paul was born in Boston and after graduating from Tech worked for Lockheed Aircraft Company and the Chance-Vought Division of United Aircraft, and Republic Aviation Corporation. He joined the M.I.T. Lincoln Laboratory staff in 1956 and was employed at Tech until his death. He was recently in charge of a team of engineers investigating structural analysis and testing of the Haystack antenna system and developing computer program techniques for this type of analysis. Paul was a member of the Institute of Aeronautical Sciences, the M.I.T. Alumni Association, the Boat Club of M.I.T. and the Theta Chi fraternity. He is survived by his wife, Rosamond Scott, his father and mother, Mr. and Mrs. Oscar W. Alberti, two sons, Scott and Paul Wendell, and a daughter, Rosamond Ellen.

**Herbert Wheeler** is now associate professor of architectural engineering at the Pennsylvania State University. Previously, he was in charge of building systems and products development at the Curtiss-Wright Corporation in Caldwell, N.J. Among his accomplishments have been the design of a germ-free surgical isolation system, the design of army surgical hospitals, and the development of medical and environmental systems and planning for radiological decontamination in post-attack periods. . . . **Russell DeYoung** has been elevated from president to chairman and chief executive officer for Goodyear Tire and Rubber Company. . . . **Eldred Timson** is now vice-

president of the Sunbeam Corporation in Chicago. . . . **Russ Haden**, at one time class president, formerly a vice-president at the Dewey & Almy Chemical Company division of W. R. Grace and Company, is now president of Ionics, Inc. . . . **Joe Libsch** is head of the Department of Metallurgical Engineering and director of the Materials Research Center at Lehigh University. . . . **John Lutz** is now vice-president-general manager of the Gould Engine Parts of Gould-National. John, for many years, was with the Wilkening Manufacturing Company, prior to its merger with Gould-National.

**Jess Perlas** has been appointed general manager of the National Waterworks and Sewerage Authority in the Philippine Islands. . . . Recommended reading is "Autobiography of a Parkway" which appeared in the New York Times for August 2, 1964. The section is devoted to the Garden State Parkway whose director is our own **Divo Tonti**. . . . **Pamela June McKinley** was married to **Norman Everett Olson**, Jr., in Bower Hill Community Church, Mt. Lebanon, Pa., on June 6, 1964. Pamela is the daughter of **Robert McKinley** of our class; this is the first recorded wedding of a classmate's son or daughter. Time is certainly marching on! . . . **Sam Goldblith** was the moderator at a seminar on "Food Technology and Kashruth." The seminar was advised that the impact of modern food technology on the Jewish dietary laws has profoundly changed the procedures for the kosher certification. Among the problems which had to be solved was the inclusion in a statutory code some 3,500 years old, of commodities and mixtures of commodities and chemical substances which did not exist in ancient days, such as emulsifiers, anti-tacking agents, lubricants, fungicides, vitamins, bacteriostatic agents, etc.

**John Scalzi**, Director of U.S. Steel's marketing technical services, gave a talk on the economical advantages of designing with the family of steels at a seminar in Chicago last June. . . . **Donald Stookey** at a recent meeting of the American Institute of Chemical Engineers delivered a paper on the chemical structure of glass and glass ceramics. He pointed out that in the area of glass technology there are a growing number of high strength materials and products which are useful not only in defense industries but in laboratory equipment, kitchen utensils and even flexible automobile windows. . . . **Tom Jones**, President of the University of South Carolina, gave a talk in Charlotte, N.C., on the "Engineer and Man in Space." . . . **George Mounce** is vice-president of Electronic Associates in Canada. He was one of the two founders of this company in 1946. This Canadian based organization, which has developed automatic inspection and control equipment for paper mills, has expanded to the extent that it has set up an American subsidiary. . . . Vice Admiral **Horatio Averó** was at the commissioning of the 22nd Polaris submarine.

**Dr. Clinton Powell** has retired as director of the National Institute of Advanced Medical Science. As director, Clint played a key role in formulating national programs for strengthening

medical research. . . . At the Alumni Day exercises held last June the following members of our class were present: John Danforth, Sam Goldblith, Bernard F. and Mrs. Greene, Ed and Mrs. Kingsbury, Geoffrey Roberts, and Phil Stoddard. As of last June, our class had contributed \$149,100 toward the goal of \$250,000 for our 25th Reunion gift. We can realize our goal if we all chip in during the coming year.—**Alvin Guttg**, Secretary, Cushman, Darby and Cushman, American Security Building, Washington 5, D.C.; **Samuel A. Goldblith**, Assistant Secretary, Department of Food Technology, M.I.T., Cambridge, Mass.

## '41

Those attending Alumni Day activities at M.I.T. in June were Everett R. Ackerson, Michael and Mrs. Driscoll, Donald M. Knott, Edward R. Marden, Irving Stein, D. Reid, Jr. and Mrs. Weedon, and John H., Jr. and Mrs. MacLeod. . . . **D. Reid Weedon, Jr.** was awarded a Bronze Beaver Award for his efforts in raising Alumni Fund giving to the million dollar bracket. The award was presented in September at the Alumni Officers' Conference at M.I.T. Those attending the conference were Zachary Abuza, Everett R. Ackerson, Henry Avery, Edward A. Beaupre, Robert W. Blake, George B. Boettner, Michael Driscoll, Edward R. Marden, Walter J. Kreske, Rea W. Stanhouse, Irving Stein, Marjorie Swift, Frederic W. Watriss, and D. Reid Weedon, Jr. . . . **Raymond G. O'Connell** spoke on the "Opportunities for Mechanical Engineers in the Metal-working Industries" to the Department of Mechanical and Industrial Engineering, University of Illinois at the end of their spring semester. Ray is sales manager, Bearings Division of the Torrington Company, Torrington, Conn. . . . The Washington, D.C. area, particularly Arlingtonians, are glowing with pride at the outcome of the coaching activities of **Charles S. Butt, Jr.** Fifteen years ago Charles volunteered to organize, without compensation, a high school rowing crew in the Washington-Lee High School of Arlington, Va. That same year W-L won the national schoolboy title in a borrowed shell. Ten times since then W-L has repeated as national champion and last July went to England to compete for the fourth time in the Henley Royal Regatta. In slightly more than two weeks, the people of Arlington raised \$10,000 to send this W-L High School national championship crew to represent the United States at the regatta.

**Dr. Austin W. Fisher, Jr.**, Corporate Vice-president for research and development, Ludlow Corporation, spoke on "Factors Influencing the Rate of Diffusion at the R & D Interface" at an Organization Research Program Seminar in the Sloan School of Management recently. . . . **Frank S. Wyle**, President of Wyle Laboratories, an independent aerospace test lab in El Segundo, Calif., spoke in New York on the subject of "Transplant of Technology from Aero-

space to Other Industries," in which he made the observation that "the problem is not inventing things, but finding, or inventing, applications for existing inventions."

We have a further report on the untimely death of **Wilson M. Compton, Jr.**, who died from a heart attack during a business trip in Washington last July. Wilson, 45, had been president and director of the Cameron Machine Company of Dover, N.J., since 1956. He was also on the board of Dorr-Oliver, Inc. of Stamford, Conn., a director of the Machinery and Allied Products Institute, the Technical Association of the Pulp and Paper Industry, the Paper Industry Management Association, and the Packaging Machinery Manufacturers Institute. He was also president of the Pulp and Paper Machinery Association, a member of the Young Presidents Organization and a board member of United Corporate Giving, the Community Chest and the Morris Junior Museum. He was a member of the Board of Adjustment of Morris Township. He served in the Navy as a lieutenant in World War II. He was a nephew of the late Dr. Arthur H. Compton, the Nobel Prize-winning physicist, and of the late Dr. Karl T. Compton, former president of M.I.T. He leaves his wife, Mrs. Dorothy Whealton Compton; a son, Wilson M., 3d; four daughters, Dorothy Ann, Mary Holly, Elizabeth Sudler, and Nancy Ross Compton; and his parents, Dr. and Mrs. Wilson M. Compton; as well as a brother Ross and two sisters, Mrs. Helen Graham and Mrs. Catherine Chase.

A recent communication from **Howard J. Samuels** states: "I think the accomplishment that I take the greatest pleasure in is the fact that I believe I will be the first from the class of '41 to have a son graduate from M.I.T." Howy went on to say that his son is a senior this year and has a high cumulative. If there are others in the class with progeny at M.I.T., we would appreciate hearing about them to help us to determine whether Howie's son will be the first.

Professor **Fred T. Haddock** of the University of Michigan is listed by the National Aeronautics and Space Administration as head of one of the 22 scientific experiments selected for the fifth Orbiting Geophysical Observatory (OGO-E), scheduled to be launched by an Atlas-Agena vehicle from Cape Kennedy, Fla., in 1966. Fred's experiment will be in about 220 pounds of radio astronomy instruments. The 1,100-pound satellite is scheduled to be launched into an orbit with an apogee of 92,000 miles and perigee of 170 miles. Solar cells mounted on two large rotatable paddles will supply electrical power. OGO-E studies are expected to play an important part in learning more about the dangers of energetic particle radiation and its dangers for space travelers, earth and interplanetary magnetic fields, effects of solar gasses (plasma) on the Earth's magnetic field and radio communication, and the effects of solar radiation on the earth. . . . **Malcolm D. Bray**, Ph.D., has recently been made director of the product development division of Eli Lilly and Company of Indi-

anapolis, Indiana. . . . We received news that **Rosario S. Badessa** is one of a group of three engineers who recently developed a novel electronic square wave-phase modulation system to correct for cavity detuning errors in cesium atomic beam frequency standards. . . . **Carl W. Hasek, Jr.**, formerly a director of the 'N.S. Savannah' Technical Staff of the Babcock and Wilcox Company at Galveston, Texas, has been assigned to the Atomic Energy Division headquarters in Lynchburg, Va. As director of the Savannah Technical Staff, Hasek was responsible for maintenance of the nuclear merchantman's reactor, the training of a new crew and improvements made to the ship while she was at Galveston. Prior to his Galveston assignment, Hasek was head of product planning and market research. He was also responsible for B&W's nuclear marine marketing activities. He was born at State College, Pa., and received his B.S. degree in marine engineering from Penn State. He received his M.S. degree in marine engineering from M.I.T. He joined B&W in 1936 and was transferred to the A.E.D. in 1957 as assistant manager for the 'N.S. Savannah' and was promoted to project manager the same year. He was on leave for special work with the U.S. Department of Commerce from October, 1959, through April, 1960. . . . **Dr. Stanley Marple** has recently been promoted from the position of assistant chief research chemist in the Houston Research Laboratory of the Shell Oil Company to the Head Office Technological Department as a special technologist.—**Walter J. Kreske**, Secretary, 53 State Street, Boston, Mass.; **Henry Avery**, Assistant Secretary, 169 Mohawk Drive, Pittsburgh, Pa.; **Everett R. Ackerson**, Assistant Secretary, 16 Vernon Street, South Braintree, Mass.

## '43

Indicative of the grand comradeship of '43, the Class Colossal, your secretary received some fine letters during the summer which it is a pleasure to reprint here. . . . **Guy Calleja**, Class Agent, received the following from **Jack Kelly**: "As class agent, perhaps you would pass a few remarks along to the secretariat of The Technology Review; it has been 'many moons' since I sent any words about myself (and other M.I.T.ers) that way! Having started work as a chemical engineer with the Standard Oil Company of New Jersey after graduation in Course X-C (Yes, there was a special "split" Chem Engineer Practice School session, partly in undergrad time and partly in graduate school time in 1942-1943), I went on into various spots in the refining end of their business until 1954 (not counting two years out for Uncle Sam's Navy in 1944-1946). Since 1954, I have worked in various positions, including four years in the Transportation Coordination Department of the "Jersey" Company, where I was in charge of special studies relating to the optimum coverage of worldwide tanker requirements be-



tween owned and chartered vessels, etc. In 1960, I moved to a London-domiciled assignment as adviser for Eastern Hemisphere crude oil and product supply matters for Esso International, Inc. I returned to New York in early 1963 as planning manager of supply, later last year moved into the Cargo Sales Department and on October 1, 1963, was appointed assistant general manager of the Marine Sales Department of Esso International. These columns are not a place for 'free advertising,' but the Esso oval in the marine trade is found just about everywhere in the world where ocean vessels call. It is a long trail from chemical refining engineer to my present spot but each step has been 'jolly good' as my boys used to say during the London tour of duty. The Kelly family: my wife, Lois, plus four boys ranging downward from Brian who is now 17, through Kevin, 14, Alan, 11, and Torin who is 8. Westfield, N.J. a 'hot-bed' of M.I.T.'ers—is still home. My '43 classmates and fellow Esso-men, **Jack Gardner** and **Andy Kean** are still with the Humble Oil and Refining Company in the Houston manufacturing headquarters. Last I heard, these displaced Yankees were enjoying their Houston location very much. That's all—and much more than I had planned."

The following letter was received in June from **Mert Hubbard**, who lives in Burlingame, Calif.: "Several years have passed since I brought you up to date. I am starting my 10th year with Hills Brothers Coffee in San Francisco. This western living has been responsible for three new hobbies: camping, photography (the scenery is spectacular—even in our back yard), and lapidary. The latter (rockhounding) has led us to the beaches, mountains, and mine dumps throughout the coastal states, looking for jade, jasper, agate, and petrified wood. We have built up a small shop for polishing gems and making jewelry, and the wife and kids are quite adept at the art. My older daughter has been accepted at Pomona for next year; the younger one has become a fairly serious violinist. Although I run into alumni of other classes frequently, the only classmate I see fairly regularly is **Hal Rosoff**. He is with Lucky Lager Brewing. I am looking forward to the big anniversary and reunion in 1968." . . . **Bob Mason**, district manager of the Pine and Paper Chemicals Department, Hercules Powder Company, Kalamazoo, Mich., wrote as follows: "It has been so many years since I have been in touch with you, or for that matter most of the members of our class, that I would not know where to begin to bring you up to date on my movements. I have not lived in Boston since graduation, and except for a period in the Navy, my entire working career has been with Hercules Powder Company. After several moves, I was most recently located here in Kalamazoo and am working in the paper chemicals sales division of our company. One of these days I will sit down and give you a complete biography. Hope all is well with you and that before too long we will be able to get together. Although four years hence is a long time to start making plans, I know it will pass quickly and I will cer-

tainly make every effort to attend the 25th Reunion."

**David Halpern** wrote in June: "Some day I will be activated enough to write you regarding my recent doings. I have just resigned my position as research director of Borden Chemical Company to set up my own consulting, research and development laboratory." The name of his company is Polysciences, Inc. located in Rydal, Pa. . . . In May, we received notice that **Carlton Lehr** became staff engineer of the Smithsonian Astrophysical Observatory of Cambridge, Mass. After serving as a radar officer, he returned to M.I.T. in 1946 as a research assistant in the D.I.C. and was awarded his master's degree. Following that he was with Raytheon in the Magnetron Development Lab, and then as manager of the Microwave Group. Carlton lives in Lexington with his wife, Elizabeth, and three children, Janet, Judith and Betsy. . . . Reverend **William C. Seitz, Jr.** became rector of St. Andrew's Church (Episcopal) in Akron, Ohio, in June. . . . An article in the Christian Science Monitor in June entitled "Designer of Air Force Chapel 'Vindicated'" brought us up to date on the activities of **Walter A. Netsch, Jr.**, the designer of that chapel, which won for him and his firm architecture's top accolade—the \$25,000. R. S. Reynolds Memorial Award. Walter was quoted as saying that his design represents a kind of symbolic unification of the rights of individuals to worship as they please within a structure that expresses a special sense of purpose. He and his firm, Skidmore, Owings and Merrill, are presently working on plans for the new University of Illinois campus in Chicago, for expansion of the Northwestern University campus, and on new buildings for M.I.T. His earlier works have included the Westinghouse Research Laboratories in Pittsburgh, the United States Naval Postgraduate School in Monterey, Calif., and the Lake Meadows Apartments in Chicago.

Just before going to press, I received the following letter from **Earl Bimson**, Executive Vice-president of Valley National Bank, Phoenix, Ariz.: "Last week I returned from a trip through the East, which I took with my three children—Pam, 17, Earl, Jr., 16, and Mark, 13. While traveling by motorcar across Michigan, we stopped at Flint and spent the night with Dick and Jean O'Hara, '44. Dick is a Chi Phi fraternity brother of mine, and we had not seen each other since school days. It was a great reunion and, needless to say, we spent most of the night talking about old times and bringing each other up to date on current events. Unfortunately, time did not permit us to look up any more of my classmates. However, we did spend three days in Boston and took out half a day to tour M.I.T. The children were particularly interested in visiting some of the laboratories and seeing the work going on there. Certainly the old alma mater is a spectacular spot to take the teenage offspring. Part of the motivation for the trip is that each summer I spend two weeks at the University of Wisconsin, conducting a night seminar for the adult education program of the National Association of Bank

Auditors and Comptrollers. This year completed my seventh year as seminar leader. I think this about covers the news tidbits I have now, other than to say that I am one member of the Class '43 who very much appreciates the effort that you and John W. McDonough, Jr., put in to gather up the notes on our class for The Technology Review. I know it is a thankless job, but a great number of us appreciate the opportunity to read about some of our old friends."

Gus Calleja, Leo Fitzpatrick, Gene Eisenberg, Jim Hoey, and I were privileged to attend the annual afternoon party on Alumni Day in June given by the Class of 1915—"The Class Supreme"—whose secretary, Azel W. Mack, is always the genial host. . . . Ken Warden, Ken Wadleigh, and Tom Dyer were also at Alumni Day this year.—**Richard M. Feingold**, Secretary, 266 Pearl Street, Hartford, Conn. **John W. McDonough, Jr.**, Assistant Secretary, 525 North Lincoln Street, Hinsdale, Ill.; **Christian J. Matthew**, Assistant Secretary, Research Specialties Company, 200 South Garrard Boulevard, Richmond, Calif.

## '44

What a reunion! For those who were there, I shall try to record some of the activities; for those who were not, I shall try to pass along some news. The group got together at the Curtis Hotel in Lenox on Friday evening and managed to keep something going for the rest of the weekend. Saturday, the morning activities were to get fed, and then go out for golf, sightseeing, or antiquing expeditions. In the afternoon a baseball game with the Class of '59, which was also staying at the Curtis, ended up with the score of 10 to 9 in our favor. Our captain **Ray Gamundi, II**, indicated that our success was due to three factors which were all in our favor—the cheering section (our wives were better at keeping the players refreshed), our second team, (our children were older than the second team fielded by '59) and of course the '44 players were better co-ordinated! Saturday night the banquet was a big success; in fact, between the formal activities and a couple of slide presentations, there were activities until early Sunday morning. I understand from those who were on that side of the hotel, that several of our classmates were swimming in the pool after the formal activities were buttoned up. Sunday, we had the traditional lobster dinner, and everyone enjoyed the wonderful weather of Western Massachusetts.

Now for a few names of those who were there: **Jack Hunn, IX**, who came from Milwaukee, stopped in Rochester to stay overnight with **Arnold Mackintosh, X**, who handles R and D purchasing for Eastman. **Bob Estes, IX**, came up from Alturas, Fla., with his wife; he reports that the orange business is hard work, but profitable. Bob has been branching out a bit lately and working in the securities market. He lives near Bock Tower and



Cypress Gardens. A report from **Ken Nelson, XV**, is that business is great on Staten Island and the new Narrows Bridge will make it better. Ken has been developing a magnetic bulletin board which is an aid to production, and he reports that his company has sold them all over the country. Ken reported that **Bill Ritterhoff, II**, was moving to Long Beach, Ill., where he is supervising the new mill that Bethlehem Steel is building in northern Indiana. On Saturday morning John Hull, XVI, Scott Carpenter, X, Bob Estes, IX, and I went over to Tanglegrove to inspect the facilities. The formal gardens, and the general plant available for music and drama are magnificent. We managed to see most of the small theatres and the concert theatre.

**Bob and Maybelle Fisher, XV**, were with us, as they had been at the 15th Reunion, and enjoyed the 20th equally as much. They live in Philadelphia where Bob runs the James F. Burns Company. . . . **Jim Eberly, XV**, was up from Washington where he has been working for a number of years in electronics representation. . . . **Thornton Smith, I**, who is listed as '45 but has been coming to the '44 activities, came up from Plandome L.I., N. Y. He has his own construction firm in New York City and took the time to come to reunion while his wife went to hers at Wellesley. Thornton is quite a booster for Plandome, saying that it is the best station (most parking area) on the best line of the Long Island R. R. (Fewest stops to Pennsylvania Station). . . . During the weekend, I kept running into **Doug Russell, XV**, who is supervisory engineer in the Bechtel Office in San Francisco. It was generally agreed that Doug had traveled the furthest to get to the reunion. I last saw Doug at the Union Oyster House with **Jack and Wanita Hunn**, . . . **Joe Lester, XVI**, was traveling north from Wilmington, Del., where he is with DuPont working on the introduction of Corfam. Joe's children Martha, Mary and Joe, 3d, thought the Curtis was great, and they managed to get in a good deal of swimming while in Lenox. **Chet Woodworth**, in charge of R and D at Monsanto in Springfield, Mass., came over on Saturday and he promised to call me up next time he was in Norwalk, Conn.; he spends summer weekends there on the Sound. I seem to have many more notes, and shall continue next month. The statistically minded might like to know that the members of the class who returned their questionnaires indicate that they own three and nine fourteenths airplanes. The man with nine-fourteenths of a plane reports he has a bit of trouble, but does manage to get about. Will see you next month, hope you had as good a summer as the Heilman's did.—**Paul M. Heilman**, Secretary, 30 Ellery Lane, Westport, Conn.

# '45

Our 20th Reunion year started last September with several classmates spending a most rewarding and refreshing

time as guests of the Institute at the Fifth Alumni Officers' Conference. I suspect that this conference has been covered elsewhere in The Review so there is no need to report details. I do feel, however, that you should know that all the participants performed in excellent fashion. The necessary role of the Alumni in the continued well-being of the Institute was a continuing theme. As alumni you can rest assured that the administration and staff of the Institute, too, recognize their responsibilities—especially to the Alumni.

The class was well represented by **Chris Boland**, **Dave Flood**, **Bob Gardner** (an architect all the way from Cedar City, Utah), **Tom McNamara**, **Bob Maglathlin**, **Bill Shuman**, **Prexy Dave Trageser**, and Secretary **Clint Springer**. In addition you should recognize the names of the following former '45ers: **Art Schwartz**, Secretary of '47; **John Reid**, Assistant Secretary of '48; **D. K. McNear**, Regional vice-president of '48; **Dick Snow**, '48, of Marblehead, Mass.

By now you should have received the 20th Reunion Committee's first mailing. You know that our gala 20th will be at the Wychmere Harbor Club at Harwichport on the Cape the second weekend in June, 1965. Yes, the Wychmere Harbor Club is the former Snow Inn—the site of our 15th Reunion in 1960. We have been promised the same fine food (who could forget that buffet!) and more importantly our meteorologists assure us of fine weather as well—for the first time in 20 years! Don't forget your class dues or your class record questionnaire. I am especially anxious to have the latter for Class News use in the months to come. I will regularly report on reunion attendees and plans starting in January. Plan that June vacation now! **Bob Maglathlin** had his first Reunion Committee meeting at the M.I.T. Faculty Club on May 21 with **Bill Meade**, **Bill McKay**, **Dave Flood**, **Dave Trageser** and **Bob** on hand. At that time the following sub-committee appointments were made: Treasurer, **Bill Meade**; Publicity, **Tom McNamara**; Registration and Reception, **Bill McKay**; Program and Sports, **Jerry Quinnan**; Banquet, **Dave Trageser** and **Clint Springer**; Party Arrangements, **Dave Flood**; Favors, **Bill Shuman**. The second meeting was held Friday, September 18. **Bob** has specifically asked me to tell you all that he and his committee would welcome suggestions to make our 20th bigger and better than ever.

The class should be reasonably proud of our Alumni Fund participation in 1964: our 1964 performance was not as good as 1963, nor is it as good as 1965 will be! One hundred and seventy-four classmates of 452 members on our active class roll contributed \$5,715 for an average of \$33; unfortunately, the mean contribution was well below this figure, and it is the mean and number of contributors we want to increase in the future. A special bouquet goes to New York Area Special Gifts Chairman **Max Ruehrmund** (since retired!) for his 100 per cent increase in performance. The class should be proud too of the performance of its Area Chair-

men: **Jim Levitan**, 82 per cent; **Chris Boland**, 60 per cent; **S. E. Penner**, 113 per cent; **Jack Vozella**, 45 per cent; **Jack Atwood**, 69 per cent; **Walt Borden**, 69 per cent; **Joe Neschleba**, 87 per cent; **Ross Compton**, 75 per cent; **Pete Schwab**, 60 per cent; and **Dave Cohen**, 58 per cent. I hope I didn't forget anyone.

The May 15 New York Times contained Johnson and Johnson's announcement that **David R. Clare** had been appointed executive vice-president in charge of operations, with responsibilities for manufacturing and engineering personnel and distribution service departments. Dave has traveled up the management ladder in rapid fashion since joining J & J upon graduation. Although heartiest congratulations are in order, our thoughts are with his good wife Peggy, for we wonder what hours Dave must keep in this highly responsible position. . . . Another classmate on the rise is **Hal Thorkilsen**, now group product manager for toilet articles at Colgate-Palmolive. During a recent visit to Colgate's Jersey City plant, several of the secretaries, remembering Hal's Jersey City days, continually stated that he was handsome but nice! . . . The Honorable **Bob Symonette**, Speaker of the (Nassau) House, again raced to Bermuda in June on Bill Snaith's 'Figaro.' . . . **Bill Blitzer** has had an excellent summer with his Rhodes-19 down in Larchmont, and we suspect that Ann Street, Chick's older daughter, coped the Blue Jay honors in Narragansett Bay. I might add that Chick serves as Ann's crew! Chick himself finished second in the Class B-1 fleet during the Off Sounding's Club spring regatta.

**Dr. Ed Kelly** of Lincoln Lab spoke on "Application of Statistical Interference to Seismic Arrays" at an Earth Sciences Seminar at M.I.T. in early March. **Dr. Dick Battin**, also of Lincoln Lab, published a book earlier this year entitled "Astronautical Guidance," one of the Electronic Sciences Series. . . . Did any of you note the A. G. Becker and Company advertisement in the July 3 issue of Time? It contained a picture of **Mal Schoenberg**, one of Becker's registered representatives. You will recall that Mal was a Course VI man. . . . In mid-February, **Marshall Byer** of Vestal, N.Y., was appointed an advisory engineer in analytical design engineering at IBM's Space Guidance Center in Oswego, N.Y. In early July, **George Armstrong** of Wyckoff, N. J., joined Mobil Chemical Company as a senior process analyst; George had been with American Cyanamid working on large scale process automation projects. . . . **Don Wrisley**, who has had 16 years experience in the vibration environment field, was recently named applications engineer by the LTV Ling Electronics Division of Ling-Temco-Vought, Inc. . . . **Chuck Buik** of Essex Junction, Vt., headed the industry division of the Burlington, Vt., Red Cross fund campaign. . . . A local society item in an early July issue of the New Bedford Times indicates that **Emilio Hoigne** of Valencia, Venezuela, continues as an executive of H. J. Heinz Company. No real details on Dad, but we

can report that his daughter Cheryl has entered New College in Sarasota, Fla. . . . **William K. Linvill** continues as chairman of the executive committee of the Institute in Engineering-Economic Systems at Stanford University. . . . **Dr. Richard B. Marsten**, Manager, Spacecraft Electronics, RCA Astro-Electronics Division spoke on "Satellite Communications: 1964 Appraisal" at the May meeting of the Princeton Section of I.E.E.E. . . . The Institute reports that the following '45ers attended the last Alumni Day: Jay and Mrs. Forrester, Jim and Mrs. Gurney, Charlie and Mrs. Hart, Tom and Mrs. McNamara, Bob and Mrs. Maglathlin, Warren Miller and Bill and Elaine Shuman. I know that our 20th Reunion will swell next year's ranks. —**C. H. Springer**, Secretary, Firemen's Mutual Insurance Company, 420 Lexington Avenue, New York, N. Y. 10017

## '46

We received three letters during the summer, for which we are most grateful. **Bob Nelson** left his engineering job with Raytheon, sold his house in Sherborn, Mass., and moved to 2001 Stratton Drive, Potomac Woods, Rockville, Md., 20854. Bob is working for the U. S. Navy Scientific and Technical Intelligence Center in Washington. He is still in the Naval Reserve and wonders whether anyone in our V-12 class has yet made commander. Other than those few who stayed in the Navy, I know of no one who has made it. I have been passed over three times now and have given up all hope. Anyone in our vast reading audience who can top that? . . . **Ned Spencer** wrote to say that he is a vice-president of Wheeler Laboratories, Box 561, Smithtown, N. Y. (a subsidiary of Hazeltine Corporation). His specialty is in the field of microwave devices—especially antennas. He has been active in the I.E.E.E. and organized the symposium on antennas and propagation which was held in September. Ned informed us of another honor accorded **Bill Siebert** recently. In addition to his promotion to full professor, Bill received the award of fellow from the I.E.E.E. last March. Congratulations from all of us, Bill. . . . **Jim (Knobby) Ray** wrote from his home at 16344 Englewood Avenue, Los Gatos, Calif. He and Bettie have two boys, 6 and 3 years old. Jim has been with Lockheed Space Systems for the last six years, and for extracurricular activities is a member of a skin-diving club, a member of a conservation group called the Sierra Club, and writes fiction about engineers. Jim included a number of philosophical observations in his letter, most of which I am sure he did not intend for publication. One item I think is of general interest. I wonder how many have a similar feeling. Jim said: "my business career has been a kind of rolling-stone existence, largely of my own making. As a matter of simple honesty, it hasn't been all skittles and beer. Added up I would say about one-third of my 15-plus years

in the industry have been challenging. That's about par for the course, wouldn't you say?" What do you say?

**Leon J. Weymouth**, Sensors Sales Manager for Baldwin-Lima-Hamilton Corporation, presented a paper entitled "Strain Gage Application by Flame Spray Techniques" at the 19th annual I.S.A. Instrument-Automation Conference and Exhibit. . . . **H. Frederick Goelzer**, Manager of Production Programs of the Marquardt Corporation's Pomona Division (Calif.), has been awarded an Alfred P. Sloan Fellowship at M.I.T. for 1964-1965. Fred is one of 45 young business executives from the United States to be selected to receive this full year's education in management, culminating with a master of science degree. Prior to his service with Marquardt, he was director of engineering for Associated Missiles Products Company, and had been with Convair, Ryan, and the National Advisory Committee for Aeronautics. . . . **Robert W. Kolb** has been appointed general purchasing agent of the Dominion Textile Company, Ltd., Montreal. . . . **Captain Negus W. Knowlton**, who recently retired from the Navy, has been appointed manufacturing consultant to Southern Industries, Inc., Richmond, Va. Negus received his master's degree in 1946. . . . **Navy Captain Ben B. Pickett** (he also received his master's in 1946), Commanding Officer of the guided missile cruiser 'U.S.S. Albany,' was recently relieved of that command and is now commanding officer of the Naval Weapons Station at Yorktown, Va. . . . **Harold S. Mickley Ph. D-46**, Ford Professor of Engineering at M.I.T., is now serving as director of the new Center for Advanced Engineering Study, established at M.I.T. by a \$4 million grant from the Alfred P. Sloan Foundation. . . . **Alfred Edwards**, Fall River, City Planner, is playing a major role in the resurgence of that Massachusetts city from its depressed condition caused by the decline of the textile business. . . . **L. Charles Wellard** is the author of "Resistance and Resistors", McGraw-Hill, 1960. For the last three years Chuck has been president of American Components, Inc. Prior to his present position he was technical director of the systems division of Clifton Precision Products. . . . Alumni Day last June found in attendance: Mason I. and Mrs. Lappin; Donald A. and Mrs. Hurter; Clifton B. and Mrs. Sibley; Clarence S. and Mrs. Lyon; Louis H. and Mrs. Martin; and Samuel Meerbaum. That's all for this month. Thanks again to our three correspondents. May your kind multiply and prosper.—**John A. Maynard**, Secretary, 25 Pheasant Lane, North Oaks, St. Paul, Minn. 55110

## '48

"Find a pleasant country inn, anywhere in the world, and wait there. Seraffyn will show up eventually." Thus reads a sentence in a promotional brochure entitled: "Seraffyn, Wandering Minstrel International." It is with regret

that we report here the death of **Donald C. (Seraffyn) Mork** in an automobile accident on April 24 in Hardeeville, S.C. "The Last Great Troubadour," although with us at M.I.T. for only one year, was a member of our class, and we cannot help but take some pride in having our numerals borne by a noteworthy contributor to the arts. He had been described as the official household bard of the Treadway Inns and was internationally famous as a minstrel. He was raised in Newton, attended Newton High School, M.I.T. for a year, and then graduated from Harvard with honors. This was followed by three years in the Army and then attendance at the Royal Academy of Dramatic Arts in London. He has been described as a proficient Shakespearean actor, and he appeared in a dozen off-Broadway plays. His idea was that poetry could best be enjoyed orally and accompanied by music, and thus, adopting the Welsh name, Seraffyn, he became a minstrel, his wanderings taking him to a score of countries. He spoke several languages and entertained royalty and the peasantry alike. In 1953 he won the folk song award at the International Festival in Wales. His "uniform" consisted of a doublet, green and gold hose, a cloak and sueded boots, and he carried an ivory-handled dagger and a lute. His first record was released by Columbia Records last April and was entitled "Of Love, Of War, Of Many Things." He was a younger brother of Raymond P. Mork, '43. Our class extends its sincere sympathy to his family.

Our sympathies, also, to the families of **Kenneth M. Thompson** and **Colonel John H. Savage**, of whose deaths we have just learned. **Kenneth Thompson** passed way in November, 1961, and **Colonel Savage** died last July 9. **Colonel Savage** was buried with full military honors in Arlington National Cemetery. He was director of research and engineering at the United States Army Tank-Automotive Center before his retirement on June 18. He was born in Victoria, British Columbia, attended the Los Angeles public schools, and entered the Army in 1940 after receiving his bachelor's degree from the University of California. He earned a master's degree at Tech in 1948. During his military service of more than 20 years, he was awarded the Order of the British Empire by King George VI for his part in launching production of a British armored searchlight tank. He saw overseas service in England during World War II and in Germany and Korea after the war. From 1953 to 1956 he served as a technical liaison officer at the Naval Ordnance Test Center in California, where he worked on early naval rockets and missiles. Later he was chief of the ballistic missiles branch in the Los Angeles Ordnance District. He died at Walter Reed Army Medical Center, Washington, D.C.

Congratulations are in order for many of our classmates. On March 18, 1964, **Ezra Garforth** was elected president of the Philadelphia Steel and Wire Corporation. He was previously a director and vice-president-general sales manager. . . . **Robert L. Rannow** has joined H.



Sand and Company, Inc. as general sales manager in charge of administration and sales. He will develop and guide sales programs for the company which specializes in air conditioning, heating, and ventilating. Mr. Rannow was associated for the past 13 years with the New York Division of Borg-Warner Corporation as sales engineer for Metropolitan New York. . . . **Hans U. Wydler** has been appointed a vice-president and officer in charge of the International Department of Manufacturers, National Bank of Detroit. . . . **Dr. C. William Shipman** of Holden, who received three degrees at Tech, has been promoted to professor of chemical engineering at Worcester Polytechnical Institute. He was recently awarded the Silver Combustion Medal for his collaboration in research work on the study of combustion under turbulent conditions. . . . **Richard W. Eddy**, General Manager of the Chemical Intermediates Department, Chemicals Division, Union Carbide Corporation, appeared not too long ago in a photograph in which he was shown surrounded by Army generals at a meeting of the Armed Forces Chemical Association in New York, of which he is the New York Chapter president. During his service in World War II in the Chemical Corps, he rose to major and was awarded the Croix de Guerre with three palms.

Professor **Robert J. Hansen** of M.I.T.'s Department of Civil Engineering is a member of a three-man panel which visited Oklahoma City to review progress in sonic boom research in connection with the development of the supersonic transport. . . . **Dr. Armand V. Feigenbaum's** two years' service as president and one year as chairman of the board were honored by the American Society for Quality Control last spring during its 18th annual convention. . . . **Dr. Albert J. Kelley** is the head of a team of scientists and engineers picked for the job of engineering the construction of the new NASA \$60 million Electronics and Control Office of Advanced Research and Technology which is to be located within a half-hour's travel distance of the great Cambridge universities. It is expected that the NASA center will have the greatest impact on the industrial community of Massachusetts of any single economic factor in modern times. . . . **E. William (Bill) Cummings** succeeded last March to the position of chief plant and process engineer for the Saginaw Steering Gear Division of the General Motors Corporation. . . . Our **C. Vincent Vappi** and Vappi and Company, Inc., contractors, of which Vincent has been president since 1958, were the subjects late last spring of two lengthy articles, one in the New England Real Estate Journal and the other in the Boston Globe. I quote at random some of the Globe's comments: "In Vincent's time, business has increased to about \$15 million a year, an increase he hopes to continue—by about 15 percent this year . . . Vappi is one of the carpenters of the New Boston. His most-seen signboard stares from one of the walls of the \$9 million Francis Greenwood Peabody Terrace at Harvard, a spirey village of

seven buildings with 500 apartments for married students and their families . . . Vappi's staff—more than half of his supervisory men have degrees from M.I.T., Harvard, Princeton and Northeastern earned since 1948—their boss thinks, feel secure with the firm and have been given the chance to grow with it. For the firm's growth, Vappi credits—besides being in Boston—the successful application of men and money in the form of retained earnings." From the Real Estate Journal: "When C. Vincent Vappi was named president in 1958 he set out to reach two major objectives: to increase the company's volume of business and to maintain and increase its reputation for integrity and high quality work. In so doing, Vincent has come to represent a new brand of construction leader—young, progressive and at the same time conservative . . . Vappi & Company now employs one hundred to 300 men in the field and 50 more in supervisory positions . . . Vappi Development Company, a subsidiary of Vappi & Company, owns some \$5 million in real estate and develops, builds, and leases to other companies." In this article, Vincent is quoted: "We have a fine young team here, and if we are to give these younger men the kind of incentive that will make them want to stay together, the company must grow. Without growth, we could increase neither their responsibilities nor their rewards. So growth is our purpose, and the future looks bright." We must agree that it does.

**Willard M. Snyder** has been added to the water resources engineering staff at Georgia Tech in the School of Civil Engineering. **William N. Papian** was the chairman last spring of a session entitled "Logic, Layout, and Associative Memories" according to a clipping from Datamation. He was also the author of a paper in the June, 1964, I.E.E.E. Transactions-Electronic Computers. . . . **William C. King** has been elected as one of two world-wide co-ordinators by the board of directors of the Gulf Oil Corporation. Mr. King has been director of departmental co-ordination, Petrochemicals Department since 1961. . . . M.I.T. ceramics Professor **William D. Kingery** was one of three authors of an article prepared for the Journal of the American Ceramic Society, the article being entitled, "Dissolution in Ceramic Systems: II, Dissolution of Alumina, Mullite, Anorthite, and Silica in a Calcium-Aluminum-Silicate Slag." For his outstanding contributions to the ceramic field, Dr. Kingery received the Ross Coffin Purdy Award in 1954 and the first John Jeppson Medal in 1958. As guest speaker last winter at a meeting of a metals group in Pittsburgh, Dr. Kingery discussed "Diffusion Phenomena in Oxide Materials." . . . **Dr. Robert R. Heikes** of Westinghouse Research and Development Corporation was the speaker at a seminar at the Institute last May on "Transport Properties of Highly Doped Oxidic Semiconductors." . . . **Robert Garbutt** will teach mathematics and science in Bourne High School starting this fall. He formerly taught in Barnstable High School.

This immediately reminds your secretary that by the time you read this he too will have a different address (see end of these notes). It reminds him, too, of one **Peter Richardson**, until this last June a member of the faculty of Pomfret School. Although your secretary has no official confirmation as yet, the information he has managed to pick up tells him that Mr. Richardson will assume duties at M.I.T. this fall as an assistant director of admissions. . . . **Edgar S. Keats**, Project Manager, Navigation and Surveying Systems, Westinghouse Defense and Space Center, was author of an article entitled "A New Concept for a Navigation Satellite System" in a publication the name of which did not appear on the clipping sent to your secretary. The article proposed a new navigational system that uses computerized control stations and satellite relays for use in world-wide navigation and traffic control for ocean-crossing ships and aircraft. . . . **George E. Brown** has been appointed director of automotive parts and service operations for American Motors Corporation. . . . **Robert H. Bliss**, former president of our class, was named assessor of Wenham, Mass., last July. Bob was elected to this post to fill a vacancy caused by the death of the previous assessor. He is at present general manager of United Shoe Machinery's Harmonic Drive Division. . . . **Isadore Candeub**, of Candeub, Fleissig and Associates, Newark, planning consultants to the City of Hamilton, Ohio, presented in July an explanation of the recently completed Community Improvement Plan during two meetings of the Hamilton City Council. Mr. Candeub obtained his master's degree in city planning from M.I.T. in 1948. He is a member of the American Institute of Planners, the National Association of Housing and Redevelopment Officials, American Industrial Development Council, and the American Society of Planning Officials. . . . **Edwin E. Hebb, Jr.**, Course II, a senior designer at the Detroit Diesel Engine Division of General Motors, is named as co-inventor in patent 3, 118,308, for a variable speed governor with a throttle overrule mechanism, in the current issue of the GM Engineering Journal. Perhaps Ed will drop us a line telling more about his work. Meanwhile, congratulations to you, Ed.

Major **Bruce E. Morrell** is now an instructor in the mathematics department of the U.S. Air Force Academy. . . . **M. Alten Gilleo** has joined Monsanto Company's Central Research Department as a senior research group leader after serving with Teledyne, Inc., of Mountain View, Calif. . . . The following members of our class attended Alumni Day, 1964: S. Martin Billett, Benjamin J. Brettler, Kenneth S. and Mrs. Brock, C. Edward and Mrs. Carlson, George F. and Mrs. Clifford, Jr., Robert L. and Mrs. Devine, Richard H. and Mrs. Harris, Alfred R. Seville, Verity C. and Mrs. Smith, Ralph H. and Mrs. Vacca, Haig S. and Mrs. Yardumian, Marvin H. Brindis and J. Karl Justin.—**Robert R. Mott**, Secretary, Kent School, Kent, Conn. 06757; **Richard V. Baum**, Assist-



ant Secretary, 1718 E. Rancho Drive, Phoenix Ariz.; **John T. Reid**, Assistant Secretary, 80 Renshaw Avenue, East Orange, N.J.

## '49

Now that our 15th Reunion is four months past, it is your secretary's complicated duty to try to report what went on. Since the reunion was patterned after a political convention, the delegates were told in writing that moderate amounts of gentlemanly discussion would be tolerated. But they were warned that noise, cheers, demonstrations, and roisterous actions were not in keeping with the standards of dignity and decorum for which the class is noted. Maybe it was wrong to mention decorum. Anyway, by the time this scribe arrived at the convention hall Friday night, the roar coming from inside the building could only be likened to a riot in the jail yard at Sing Sing. **Ira Dyer** was trying to restore order by firing off a cannon but beyond a few perforated eardrums, no effect was noticed. Miraculously, the business of the evening was accomplished. A nominating committee was selected which would in turn select the class characters who would in turn receive appropriate prizes the following night. Mickey Ligor, George McQueen, Larry Holt, Rhoda Taschioglou, Harry Lambe, Herb Spivack, Joe Lynch, Tom Tsotsi, Fletcher Eaton, and John Horton comprised the committee which picked the following class characters: Politic Beaver (James Michael Curley Award)—Mrs. Stanley Margolin for suggesting the basic idea of the whole reunion; Sporty Beaver (elbow bending champion of '49)—**Joe Schneider** because of his known abstemious habits; Tycoon Beaver (most likely to succeed without really trying)—**Phil Candy** because no such person as Phil Candy is in our class but somebody put his name up anyway; Eager Beaver (the Sergeant Bilko prize)—**Russ Cox** because he was running the show Friday night; Party Beaver (John Profumo Medal)—**Tom Tsotsi** because he so obviously didn't deserve it; and Fraudulent Beaver—**Lou Bucalo** for trying to pass himself off as the non-existent Phil Candy; he later claimed that he was **Kemon Taschioglou**.

Saturday was devoted to a softball game in the morning and a banquet in the evening which two activities seemed to pretty well tax the capabilities of all present. Officers for the coming five years were voted on and they are: President, **Kemon Taschioglou**; Vice-president, **Jack Barriger**; Treasurer, **George McQueen**; and Secretary, **Fletcher Eaton**. It is worthy of mention that this was probably the most photographed class reunion since Louis Daguerre. Thanks to the generosity of **Bert Chope**, movies were taken of most of the activities and formal color portraits were made of each couple in attendance. The movies and stills will be assembled by the secretary (who also got appointed class archivist) and made available to groups of '49ers around the country. There is also a riotous tape re-

cording of the Friday night convention proceedings which will also be available as soon as **Chuck Holzwarth** mails it back to me. Unfortunately, no one remembered to snap on the recorder Saturday night so the awards presentations and Professor Thomas Mahoney's thoughtful speech on "The Need for Professional People in Politics" were not preserved. —**Fletcher Eaton**, Secretary, 42 Perry Drive, Needham, Mass. 02192

## '50

Welcome back to the Class News. I decided to follow the example of the majority of the Class of '50 and not write any notes. I got tied up, lazy, indifferent, etc. But, here we go again! I will be writing notes every month from now on even if it has to be about Voodoo characters. I want to keep reminding you to get your planning started for our 15th Reunion. Wow! My notes may not always be current for the next few months and may even be historical and/or hysterical. If so, write and let me know about it. . . . **John Kern** is manager of product planning for Coleman Instruments. He previously was manager of marketing research for Remington Rand office machine division of Sperry Rand Corporation. John is the father of a boy and girl at last count. . . . **Robert Stout** has been promoted to assistant superintendent at the Sparrows Point plant of Bethlehem Steel Company. Bob attended Bethlehem's training course after Tech, served in the Army, and returned to Bethlehem Steel. . . . **H. Robert Erard** is living at 28 Wildwood Avenue in Springfield, Mass.; he is employed as a physical metallurgist at the Springfield Armory research department. He recently received an M.S. degree in chemical engineering at the University of Connecticut. . . . **Thomas Furlong** was promoted some time ago to superintendent of manufacturing planning at the Management Information Center of the Chemstrand Company in Greenville, S.C.

Some of the Class of '50 seen at Alumni Day festivities way back in June included: Louis Mager, Abraham Manevitz, Searle Rees and, of course, Jack Weaver and Bob Mann. Oh yes, Bob Plouffe and Ray Keown were there also. Where were you! . . . **Gerald Lessells** lives at 1631 Gregory Avenue in Decatur, Ill., where he was elected chairman of the Mayor's Commission on Human Relations. . . . Lieutenant Colonel **Jack E. Downhill** and Captain **Robert Geiss** were among those receiving special recognition from U.S. Air Force Secretary Eugene M. Zuckert as part of the observance of the 10th anniversary of Air Force missile and space progress this year. Colonel Downhill and Captain Geiss are research and development officers at headquarters of the Air Force Systems Command's Space Systems Division. They are two of more than 850 officers and airmen serving in scientific, engineering, management and support jobs directly related to SSD's mission. The Space Systems Division is responsible for development, acquisition and launch of space vehicles and re-

search satellites. It has a primary role in managing the Air Force's military-science-industry team in the missile and space effort.

**Richard Gnecco** has been promoted to technical service supervisor of Lustrex-Lustran at Monsanto Chemical Company's Springfield plant. Upon graduation Dick worked for Boston Woven Hose and Rubber Company as a product development engineer and technical supervisor of plastics. In 1954 he joined Monsanto as a technical service representative at Springfield and has held assignments in the polyethylene, Opalon, and Lustrex-Lustran technical service groups. He is a member of the American Chemical Society. Dick lives at 77 Longhill Street and is the proud father of a boy. . . . Address changes for those of you who can write: **Fletcher Bartholomew**, 410 Old Court House Road, Vienna, Va.; Lieutenant Commander **Francis L. Fleming, Jr.**, N.A.S. Overhaul and Repair Dept., Pensacola, Fla.; **H. Gordon Fromm**, 399 Ski Trail, Kinnelon, N.J.; **Gregory Gebert**, R.D. #1, Box 173, West Hurley, N.Y.; **Dr. Victor Jex**, 5024 Goodrich Road, Clarence, N.Y. That's all for now. Glad to be back.—**Gabriel N. Stillian**, Secretary, 4 Biscayne Drive, Huntington Village, N.Y.

## '52

Summer is over, autumn has come, and with it the first column of the Technology Review notes. I have just attended the Fifth Annual Alumni Officers' Conference at M.I.T. and was most interested in the lecture demonstrations presented by two members of 1952—Professor **George W. Clark**, who spoke on "New Tools for Exploring Space" including the gamma ray telescope and Professor **Herbert M. Teager**, who spoke on "Some New Developments in Computer Access" with especial accent on a computer which can accept handwriting as an input. Herb has also been guest editor for two forthcoming special issues of the I.E.E.E. Transactions on 'Human Factors in Electronics' and a special issue on 'Input-Output Devices and Techniques for Man-Computer Cooperation.' Among '52ers present were **John Coughlan**, who is a principal in a construction business in Needham; **John Lynch** up from Cheshire, Conn., who is with American Brass Company, Waterbury as a metallurgist; **George DeMoss**, who is with Western Electric Company in Reading, Pa.; and, of course, **Doug Haven**, Associate Director of the Alumni Fund.

The mail box hasn't been overfull lately, and I think a short questionnaire may be the answer. We did get a nice letter from the **Gerry Laufs** from The Hague, telling us that he has been working since last year in Den Haag for N.A.M. Gas Export and Internationale Gas Transport Maatschappij, both of which organizations are involved in the export of Dutch natural gas from the large field located at Groningen. Gerry states that he is concerned with the economic and technical aspects of these exports.

Gerry and Anita find life in Holland very pleasant, and remind us that this is their second assignment overseas, the earlier one being two years with Esso in Hamburg in 1960-1962. Gerry mentioned of the marriage of **Richardo Haegler** recently, and reports that Richardo and his wife will be living in Brazil, where he is with Toledo do Brasil as general sales manager (Toledo Scales that is). . . . **Bob Briber** has been appointed manager-paint development for General Electric's Paint Products Section in Chelsea, Mass. This section is part of the company's Insulating Materials Department, and Bob will be responsible for all product development, application, and technical service of the section.

From Baxter Laboratories, Inc., in Morton Grove, Ill., we learned that **Sheldon G. Thorpe** has been promoted to director of quality control, working with pharmaceuticals, blood transfusion equipment, syringes, and other medical equipment. . . . **Philip Hallof** is chief geophysicist with McPhar Geophysics, Ltd. in Mills, Ontario, planning, supervising and interpreting geophysical surveys for mining exploration. . . . Lieutenant Colonel **Rocco A. Petrone**, on loan from the army to NASA, has been supervising the construction of the world's first true spaceport at NASA Space Center on Merritt Island, Fla., adjacent to Cape Kennedy; the spaceport includes launch sites for interplanetary rockets. There was an interesting article in the June, 1964, Catholic Digest on the various aspects of the spaceport. . . . **Jess L. Belser** has been appointed manager of Continental Can Company's manufacturing operation in Baltimore, Md. . . . **George M. Shields, Jr.** is a project engineer at CPC Engineering Corporation, Sturbridge, and was recently graduated from the School of Industrial Management, Worcester Polytechnic Institute. . . . **John W. Dowding, Jr.** received the master of science in engineering science from Rensselaer Polytechnic Institute in June. . . . **Harry Wenning**, with his brother John, Jr., '56, have formed Wenning Associates in Hartsdale, N.Y., an architectural firm.

**George Reichenbach**, Associate Professor of Mechanical Engineering at M.I.T., read a paper at a recent A.S.M. session concerning the basic limitations imposed on precise mechanisms by inherent material properties. . . . **Dr. Victor Mizel** has been appointed associate professor of mathematics in the College of Engineering and Science at Carnegie Tech in Pittsburgh. . . . **Robert F. King** has joined the Budd Company's Polychemicals Division as market development representative, cast nylon products and will be based in Newark, Del., at the division offices. . . . **Richard B. Gillett** has been promoted to manager of product sales for the Archer Aluminum Division of the R. J. Reynolds Tobacco Company in Winston-Salem, N.C. . . . That is about it this month; there isn't any more in the mailbox. So write, please! In the meantime, I hope to get out a questionnaire to make it easier to get news.

Your secretary left Simplex Wire and Cable and is back in the investment casting and vacuum metal field with Sigour-

ney Manufacturing Corporation, South Acton Mass., as vice-president and sales manager.—**Dana M. Ferguson**, Secretary, 242 Great Road, Acton, Mass.

## '54

When you read these words, the frost will have long been on the pumpkin and turkey will be in your minds. As they are written, however, pumpkins are just coming to market and my children are looking forward to jack-o-lanterns. At the Institute the thoughts are on returning students and freshmen, followers in our footsteps 14 years later. Because of that magic number, this past summer celebrated our gala 10th Reunion. Class President **Bob Anslow** was both guiding hand and moving spirit, though he did receive some aid from a number of our classmates in the area. One order of business at the reunion was the selection of new officers. Our new president is **Charles Masison**. Chuck is in charge of the Minuteman Systems Department at Sylvania in Waltham, Mass. The new vice-president is **Frank A'Hearn**. **Harry Taylor** was elected to the post of Secretary-Treasurer, but had to decline because he had just taken a job in Israel. Harry writes, along with his "thanks for the honor," that he had been interested in spending several years with a local firm in one of the newer developing countries. His new position with Israel Aircraft Industries involves management and the training of Israeli engineers. "The wandering Taylor," as he refers to himself, has already visited a number of places—Rome, Caesarea—and we expect to hear more about his travels. We had hoped to include some lines concerning the reunion but between The Review's deadline and the changing of the guard, it didn't make it. As part of the reunion activities you all received an anonymous questionnaire. A number of our classmates completed and returned them, and one merely sent back the envelope. A complete report is in preparation and will be mailed out later. **Dean Jacoby**, our first president and still our class agent, was particularly interested in the questionnaire's information on income and was heard to declaim, using the words "affluence and giving" several times. In a more serious vein, our support for M.I.T. is needed and in the near future, Dean, Chuck, and your secretary will be meeting to discuss some ideas on how the class can assist Dean in his job as agent and hopefully generate news and information for this column. As you all know, there are nine issues of The Review. This means that once the summer is completed, there are only 30 days between deadlines during which the secretary can receive letters, notes, etc. Therefore, please write, wire, phone (but not collect) telling us about yourself and your family and anything you know about our mutual classmates.

In April, the New York Chapter A.I.A.'s Technical Committee Lecture Series heard from **Ezra Ehrenkrantz**. Ezra is a member of the Department of Architecture at the University of California

and talked about school buildings from components. The subject stemmed from his work as co-ordinating architect for the School Construction Systems development program of Palo Alto, Calif. . . . **Vic Ellins** is now responsible for program management techniques for Sylvania in Waltham. . . . Aircraft Armaments announced in July that **Roger Griffin**, who recently joined the company after seven years with General Electric, was to be the new sales manager for the Hele-Shaw Hydraulics product line. . . . We have some more information on **Dave Howes** who is developing weapons systems concepts for G.E. In addition to his 30-acre farm in Fabius, N.Y., Dave and the two boys have taken up skiing while Peggy Lou is a substitute teacher, though from the number of days Peggy Lou reports working, it sounds as if she is the only one for miles around. . . . Graduation time at Troy, N.Y., saw **Edwin Hunger** receive an M.S. in mechanical engineering from R.P.I. . . . **Marshall Nathan** was in Cambridge in May to give a seminar on injection lasers. He is with the I.B.M. Research Center in Yorktown Heights, New York.

**Burt Noyes** is now a member of Advanced System Planning at Sylvania in Waltham. . . . **Steve Poulos** received his doctorate from the division of soils and foundations at Harvard University. . . . **Nicholas Saber**, currently with the Applied Research Laboratory of the General Telephone Company, presented a paper which was printed in the April I.E.E.E. Transactions on Aerospace. He has been working on missile- and satellite-tracking systems and the "three-body" problem. . . . Returning to the Institute for Alumni Day were **Yehuda** and **Mrs. Golahny**, **Joseph Scheller** and his wife, and **Genevieve Lavedan Ubel** (Mrs. F. A.). . . . News from some of those who received graduate degrees in 1954 is that **Hermann Haus**, who is with M.I.T.'s R.L.E., reported on "Spontaneous Emission Noise from Masers" in Radio Science. . . . **Abner Martin**, who has been chief of the Titan Guidance System at Norton A.F.B., has been selected to attend the Army War College. The lieutenant colonel is one of 205 senior officers and officials who will attend. . . . And **Eric Stevens** has moved from Shell to Monsanto where he will be an engineer in the inorganic chemicals division.—**Robert Evans, Jr.**, Secretary, 43 High Street, South Acton, Mass.

## '55

We cannot help throwing in a bit of nostalgia at the beginning of this season's class notes. It has been 13 years since we arrived at M.I.T. for Rush Week and Freshman Weekend, little knowing what lay in store. Time has passed quickly, and we are looking forward to our 10th Reunion next June. We are pleased that **Glenn Jackson** has accepted the responsibility of being chairman of this function and hope that all of you will give your full support. While on the subject of functions, the following were at the Class of '55 table at Alumni Day last June: **Jim Eacker**, **John Farmer**, **Les Gordon**, **Dick**



Lyon, and Charlie Monroe. Two of the boys are among the Last of the Great Spenders and brought their wives—Jack Brown and Harry Schreiber. . . . A card was received from **Joyce Davis** showing a picture of Trafalgar Square, London. Joyce was on her way to Geneva to attend the International Atomic Energy Conference. She is with Burns and Roe in New York City. . . . A nice letter from **Curt W. Beck** on Vassar College stationery was received in May. Curt is an associate professor of chemistry and chairman of the department, and specializes in chemical work on archaeological materials. He claims that "Vassar girls are a brainier lot than they usually get credit for being." Personally, your editor looks upon it as a problem in "group" theory. . . . **Bill Chandler** writes from Cloquet, Minn., that he has organized an Industrial Engineering Department of about 50 people at the Northwest Paper Company. In addition to caring for his wife Joyce and three little ones, Bill has had time to learn how to fly an airplane and claims that it is by far the best way to travel up there in the deep North.

**Mel Barkan** has recently formed the Barkan Construction Company with offices in Brookline, Mass., and Orlando, Fla. He is primarily involved in commercial and industrial construction. Mel joins the ranks of other classmates **Bob Posner** and **Mike Halpern** who have also set up construction companies under their own names in Baltimore and Atlanta, respectively. . . . While on the subject of entrepreneurs, a nice letter was received from **Dave Fuchs** who is vice-president of G.F.I., Inc. in Encino, Calif. They are presently manufacturing the Marc I computer. Dave is married and has two little girls. . . . We recently visited **Norm Ness** at the NASA Goddard Space Flight Center, where he is in charge of geomagnetic research. At the time of this writing, Norm was awaiting launch of the IMP II satellite and hoped that it would be as successful as the first version. Earlier in the year, Norm presented a paper at a Committee on Space Research Conference in Florence, Italy, on the results of the IMP satellite. . . . Before we take leave of you for this month, it would be breaking tradition not to insert our annual request to please drop us a note to let us know what you've been doing. Remember, we will see you in June. —Co-secretaries: **Mrs. J. H. Venarde (Dell Lanier)**, 2401 Brae Road, Wilmington, Del. 19803; **L. Dennis Shapiro**, Aerospace Research, Inc., 130 Lincoln Street, Boston, Mass. 02135.

# '56

Since the last report in July plans for our 10th Reunion have been set in motion. **Mickey Reiss** and **Bill Grinker** have accepted the posts of co-chairmen of the Reunion Committee and have secured the Wychmere Harbor Inn in Harwichport, on Cape Cod, as the site of our gathering. While the first mailing will not be sent out until the fall of 1965, we hope that you will now reserve a weekend in

June of 1966, for a visit with your classmates. . . . In September officers of regional and class alumni groups gathered at Tech to be updated on technical, academic, social and construction activities at the old home place in Cambridge. These biennial gatherings have become a source of awe and inspiration as we see the magnitude of the changes wrought by the Tech family. Classmates in attendance at the conference included **Warren Briggs**, **Paul Cianci**, **Bob Malster**, **Jesse Rothstein** and, of course, your Secretary. . . . **Warren** and **Renata Briggs** announced the arrival of a second son, **Wyman Warren**, in June, 1964. . . . **Jim Fleming** has left Corn Products to become product planning manager for institutional food products in the Durkee Famous Foods Division of Glidden. . . . **Larry Jacowitz** writes that he wed **Barbara Peiros** of Bexley, Ohio, in March 1962, just two days after he received his doctorate in chemical engineering from Ohio State. After working as engineering specialist for North American, Larry joined the Martin Company as manager of military requirements analysis. Recently he published an article on two-phase flow in *Chemical Engineering Science Magazine*. . . . **Dr. Haim Kennet**, who works for Boeing, returned to Tech to give a seminar entitled "Aerothermodynamics of Planetary Entry." . . . **Tom Lambie** is heading a group of consultants studying the Glasgow, Scotland, road and transportation system. . . . **Berthold Lippel** has been named advisory planner in image processing systems planning at the IBM Data Systems Development Laboratory in Kingston, N.Y. We are also advised that Bert has a wife **Beatrice** and two daughters, **Miriam** and **Naomi**. . . . In May **Richard Mateles**, now in the Department of Nutrition and Food Science, gave a talk on "Problems in Continuous Culture" at the convention of the American Society of Brewing Chemists. . . . **Wendyl Reis** has been named plant manager of ceramics and capacitors at the Nashua, N.H., plant of Sprague Electric. **Wendyl** had been assistant to the vice-president, corporate planning and systems. . . . **John Wenning** and his brother have formed **Wenning Associates**, an architectural design and engineering firm, in Hartsdale, N.Y. —**Bruce B. Bredehoff**, Secretary, 16 Mill Brook Road, Westwood, Mass. 02090

# '57

I trust all of you had a pleasant summer. I stayed in Boston and worked in petroleum economics for **Arthur D. Little, Inc.** This is my third and final year at the Harvard Law School; what I will be doing after next June is not certain at this time. . . . Plans are now being made for our 10th Reunion in June, 1967. **Mal Jones**, Vice-president, and I inspected a number of inns on Cape Cod and in the Berkshires during the summer. Our findings and recommendations will be presented to the class' executive committee shortly. . . . Mail during the summer was very sparse. **Stan Cortell** wrote: "I entered the

Tufts' Medical School from M.I.T. and received an M.D. in 1961. Soon after graduation from Tufts I married the former **Sharon Nason** (Boston University, '59). In 1962 I completed internship at the University of Chicago. Currently I am in my second year of residency in internal medicine at the University of Wisconsin. In May, Sharon and I had a son. I will be at the **Walter Reed Army Institute of Research** as of July." . . . A note from **Norm Lerner** read: "I started out at RCA doing design work on the Atlas missile. Following a six months' interlude with the Army teaching electronics, I decided to try the construction business in New York. While so engaged I picked up an M.B.A. from Columbia University and a professional engineer's license. About the same time **Ina Goldman** and I decided to get married. We had met my senior year at Tech; she was a student at Boston University. The construction business was not the greatest so I went back to 'the aerospace team.' I became a program manager at Associated Testing Laboratories for reliability programs on Pershing, Titan, Polaris, and Dyna-Soar. That provided a good transition to my present job at I.T.T.-INTELCOM in Falls Church, Va. We are the systems engineering division of I.T.T., engaged primarily as advisers to the Defense Communications Agency for the Defense Communications Satellite Program. As a member of the technical staff I am responsible for program management, planning, systems analysis and cost effectiveness analyses with heavy emphasis on operations research techniques. In the evenings I am working toward a Ph.D. in mathematical economics (OR) at American University."

**Don Aucamp** wrote to inform me of his plans to marry **Carol Hanks** of St. Louis on September 19. Carol is a prominent amateur tennis player. Don's note continued: "I am working as operations analyst at McDonnell Aircraft and in addition trying to complete my thesis for joint M.S. degrees in Courses XV and VI at M.I.T. I hope to begin study on a part-time basis at Washington University (St. Louis) for my Ph.D. in electrical engineering: communications, information theory, and stochastic processes." . . . From **Marty Gerson**, who is living in Washington ("tell them I am really enjoying the living here"), and working with A.I.D.'s Office of Development Finance and Private Enterprise (task: to promote U.S. private investment in underdeveloped countries), I learned that **Dave Bloomfield** recently received another promotion at IBM and that **Elliot Wolk** is now a proud father. . . . Other tidbits gathered here and there. **Harry Salesky** is now executive vice-president for administration of **Champ Hats**, a subsidiary of **Hat Corporation of America**. **Arthur Forer** received a doctor of philosophy degree from **Dartmouth College** in June, a particularly noteworthy event in that he was the first recipient of a doctor of philosophy degree (other than an honorary one) from Dartmouth in 25 years and the ninth in the 195-year history of the college. . . . I have nothing left for next month's column. I would appreciate your sitting down right now (wives,



please supervise) and dropping me a few lines.—**Frederick L. Morefield**, Secretary, 1-A Acorn Street, Boston 8, Mass.

# '58

Since our class president has decided to postpone fifth year class elections until the 10th Reunion, we have decided to appoint a new class secretary. **Michael E. Brose** has accepted the honor. If his talents and time are to be put to good use, those laggards of you (99 per cent of the class) who are not good letter writers will have to shape up. In all seriousness, he needs good communications to do his job. Just tear off a few pages and let him know what is doing with you and your friends. . . . Some final news from this pen shows '58 with two Alumni Club presidents. **Roy Thorpe** of the Northern New Jersey Club and **Bill Bayer** of Hartford. Bill also recently opened a civil engineering consulting office in Hartford, where he has been working on various building projects with precast tilt-up construction techniques. He is married to the former Barbara Davidson of Torrington and has one child. . . . **Earle Rose** has moved from Philadelphia to take a job as manager of production planning at Ocean Spray Cranberries in Plymouth. Another office opening finds **Richard P. Linde** establishing an architectural firm with offices in Sheboygan, Wis.

**Phil Strong** received his master's in science at Rensselaer Polytechnical Institute. . . . Captain **Walter Ackerlund** received silver pilot wings and has been assigned to Luke A.F.B. in Arizona for F-100 Sabre jet training. . . . Again from the Air Force, Captain **Karl Ludwig**, fraternity brother of Walt, recently received special recognition from the Air Force Secretary as a project engineer for the Atlas Missile project at the Air Force's System Command's Space Systems Division in Los Angeles. . . . I saw **Edwin Newton** and his charming bride at the recent Alumni Day. Ed is well entrenched in Rochester working for a machine tool company after spending several years in England. Doing this column has been a lot of fun. Take good care of Mike in his new assignment. A little extra help on your part is all that is needed.—**Cornelius Peterson**, 4 Rambling Brook Road, Upper Saddle River, N.J.; **Michael E. Brose**, 17 Park Avenue, Foxboro, Mass.

# '59

Five years ago this month, the '59 numerals first appeared in the Class News of The Review. With our precious M.I.T. diplomas clutched tightly in our fists, we stepped uncertainly onto the path of professional life. Then, with but a scant moment of looking back at the whirligig of undergraduate days, we plunged headlong into our new roles as engineers, scientists, administrators, fathers, and, in a few cases, mothers. The years have been good to us though, and we can expect that the

next will be even better. It has been very satisfying to me, as it certainly has been to you, to watch the progress of our classmates and to keep abreast of their accomplishments and ever-changing patterns of life. I sincerely hope that this column will continue to expand, for as our lives change and develop, knowledge of these changes becomes important to our classmates. . . . Because of a rather lazy summer here at the Institute and a somewhat hazy recollection of Saturday night at the reunion, I am still gathering information about the affair and must postpone a detailed account until the next issue of The Review. I will say now, however, that those who attended had a great time and are looking forward to the next one five years hence. The major item of class business was the election of officers. **Dick Sampson** handed the president's gavel to **Gerry Stephenson**, while **Dave Packer** moved from reunion chairman to vice-president. The meager treasury was passed on to **Bill White**, and I accepted the secretary's post without fully considering the work involved. You will be hearing soon from the new Class Agents, **Sheldon Buck** and **Lester Hopton**, with some suggestions for you about the Alumni Fund. Our thanks go out to the old class officers for their excellent work, with special recognition to **Bob Muh** for his contributions to this column and to **Dave Packer** for his work on the reunion.

I am presently trying to break down the class lists into smaller, more manageable groups. This will not only facilitate news gathering, but will also aid in the planning of informal reunions and so forth. Since our class is spread all over this country and indeed over the globe, this will be no mean task, and I would greatly appreciate volunteers as assistant secretaries. The work involved for you will be small, and the groups will be set up so that you will communicate with your friends. Whether or not you want the job, keep in touch anyway and let the class know how you are doing.—**Glenn W. Zeiders, Jr.**, Secretary, Room 31-061, M.I.T., Cambridge 39, Mass.

# '60

The news has been pouring in over the summer. This column will be carrying 5th Reunion news so keep posted. **Gerry Hurst**, Reunion Chairman, announces that a site for the gathering has been chosen: The reunion, June 13-15, 1965, will be held at Wentworth-by-the-Sea, near Portsmouth, N.H. . . . I received a card from **Bob Rothstein** from Poland. He spent the last year on a joint U.S.-Polish government fellowship. He is back at Harvard this fall as a teaching fellow in the Department of Slavic Languages and Literature. Thanks for the note, Bob. . . . **Bob Stoeckly** wrote that he received his doctorate in astronomy last June at Princeton. He will be doing research at Caltech on a one-year postdoctoral fellowship. . . . I also heard from **Deena Koniver**. Deena got her master's from M.I.T. in 1963 while working at Lincoln Lab and is now working

for General Precision, Inc., Pleasantville, N.Y. Deena also notes that **Alice Carstoin** is back in Boston as Mrs. Paul d'Entremont. Alice is working for Control Data in Burlington, Mass. . . . **Bob Gold** wrote asking me to let his friends know that he made it through Northwestern Medical School. Bob is now in the Air Force for three years—spending the first year at Wright-Patterson AFB in Dayton, Ohio. Bob says he plans to make the reunion next year. (How many more of you plan to come?) The next column will cover the various clippings I have received over the summer plus any letters I get.—**John B. Stevenson**, Secretary, Partridgeville Road, Athol, Mass.

# '61

After a summer of correspondence with '61ers all over the country and parts of Europe, there is much to report, so let us get about it. Later I will have something to say about plans for the 5th Reunion. . . . My wife and I attended Alumni Day at the Institute last June, but met few from our class. **Marion Weiner** and **Robert Lewis** were there, and **Jerry Grossman** arrived in time for part of the afternoon program. Dr. **Phillip Drinker**, Assistant Professor of Civil Engineering, gave a very interesting morning lecture on respirators for pediatric service. He is working on the development of a servo-mechanism-controlled respirator, which will provide artificial respiration for infants.

One major June occupation for '61ers was getting advanced degrees. A partial listing follows: **Al Brennecke**, **Dorsey Dunn**, and **Jerry Staack**, M.B.A., Harvard Business School; **Bob Hofland, Jr.**, M.S. in engineering science, R.P.I.; **Karl Kanus**, M.S. in electrical engineering, California Institute of Technology; **James Keller**, first in his class, graduated summa cum laude from Pittsburgh Theological Seminary; **Bill Nieckarz**, M.S., Carnegie Institute of Technology; **John Sabel, II**, and **George Yamarik**, M.S. in mechanical engineering, R.P.I.; **Dave Williams**, M.S. in chemistry, University of Vermont; and your Secretary, S.M. in nuclear engineering, M.I.T. Here are more details on the above. **Al Brennecke** married Carol Tulloch on July 11. The Brennecks moved to Columbus, Ohio, where Al is an international operations planner with Industrial Nucleonics. Carol is a graduate of Simmons School of Nursing. . . . **Dorsey Dunn** is going to New York to work for Mobil Chemical Company. . . . **Jerry Staack** graduated with high distinction, that is, roughly in the top 3 per cent of his class; congratulations are certainly in order for this achievement! He and his wife planned a six-week camping vacation in the western part of the country, before going to St. Louis. Jerry is with Emerson Electric Company in that city. . . . **Bob Hofland** has been employed as a research engineer by UAC Research Labs in their aerophysics section since graduation, and apparently got his M.S. "on the side." He has resumed full-time study at R.P.I.

now, has a research assistantship and is headed for a doctorate. Bob's outside interests include the study of the pipe organ. He is married, has no children yet. . . . **James Keller** is beginning work for his Ph.D. in the Department of Religion at the Yale Graduate School. He will be supported by a prize for graduate study from his seminary, a fellowship from Yale, and a Presbyterian Graduate Fellowship. Congratulations to Jim on his outstanding achievements! . . . **Bill Nieckarz** plans to go on at C.I.T., working toward a doctorate in nuclear chemistry.

**Ray Friesecke** continues to blaze a trail in politics. Last July he announced himself a Republican candidate for the Massachusetts House of Representatives in the Third Middlesex District (parts of Cambridge and Belmont). He is also a member of the Cambridge Republican City Committee, chairman of the Massachusetts Youth for Goldwater (as noted here in May), and has served as campaign director for the Massachusetts Goldwater forces. . . . There were June weddings this year for two of our classmates that I know of. **Ed Strachan** married Harriett Elizabeth Frederick of Louisville, Ky., on June 12. Ed met Liz while in Kentucky on Army duty, as I understand it; the Strachans now make their home in Orange, Mass. . . . **Richard Brown** married Bettys Bolster on June 27. He is presently with the M.I.T. Industrial Liaison Office. . . . **Marla Moody Heath** and husband Stanley, '60, are the parents of a son Eric, born July 7, 1963. Both the Heaths expect to be in graduate school at M.I.T. in Course XII for another year and-a-half.

I regret to inform you that **Lucio Pontecorvo** died of a heart attack on July 30, 1964, in his Westgate apartment, leaving his wife and their three-week-old baby. He was a member of our class, having received his S.M. in Course VI in June, 1961, and the first of our number that we have lost since graduation.

**Don Marquis** writes: "I have a new job as sales engineer, technical papers, Crocker Hamilton Papers, Inc., a subsidiary of Weyerhaeuser Company. I started March 9 1964. My boss, vice-president of the Technical Papers Division, is James L. McClellan, Jr., XV, '42. My primary responsibility is selling and servicing accounts using our capacitor tissue and underground power cable paper. I am also involved in R. and D. to find new uses for existing paper, and new paper to better solve problems in industry. My office is in Fitchburg, Mass., hence our move to Leominster." . . . **Mike Wechsler** got out of the Army last February (Fort Dix, N.J.) and went to work for Chemical Bank New York Trust Company. Mike passed on word that **Ken Singer** had finished his third year of medical school and is "practicing bringing babies into the world." **Clem Vaturi**, according to Mike, is "running around Europe and Africa," currently involved in a development in Tanganyika. . . . **Ron Stegen** got his M.S. in mechanical engineering from Stanford in June, 1962, worked for United Technology Center for a year or so, and is now back at

Stanford for his Ph.D. in aeronautics and astronautics. He is still single (he says). Ron asks if there's any chance of a class function in California. I do not know of any planned, but don't let that stop you. California '61ers unite! Write to Ron and scheme up a get-together. I have no current address for him so write care of Stanford. And while you are chewing the fat, get some bright ideas for our 5th Reunion (see below).

**Harry Baya** came up with the following "I received a S.M. degree in Course XV in September, 1963, and am now a second lieutenant in the Corps of Engineers, presently stationed in Wildflecken, Germany, about 30 miles from the East German border. I can not say that M.I.T. has prepared me for Army life, but it has helped me to withstand the uncertainty of dealing with things I know little about. (Do you recall a course called 6.025—it was a little like the Army)." Harry, at time of writing, was engaged to Bonnie Birdsall, and hoped to return Stateside long enough for a September wedding. . . . **Bob Caldarone**, formerly with Westinghouse, has joined the Naval Warfare Analysis Group of the Center for Naval Analyses. He is working toward a M.E.A. at George Washington University. . . . **Bob Ankrom** was selected as a summer intern by the CNA, but was with a different branch, the Institute of Naval Studies here in Cambridge. The CNA's main purpose is the management and direction of broad studies of problems in naval warfare.

Do you think of yourself as a recent graduate of M.I.T.? Think again. You'll be attending your five-year reunion before you know it. Yep, count the years. In 18 months we will have been out for five years. (Well, some of us will have.) A year and-a-half is little enough time to plan a reunion, and in fact, planning has been under way for some time. We have no details now, but do let us know at once if you can spare any time at all to help us make this a successful reunion. I have had numerous indications of interest in the postcards and letters I have received this summer. I am convinced the class wants a reunion and is willing to do the work necessary to throw a good one. But we have to get your ideas and preferences now while things are still in the planning stage. So lend a hand and write to **Ira Jaffe** (2500 Detroit Bank and Trust Building, Detroit, Mich. 48226). We are counting on people like yourself to respond with interest, to guarantee the success of the affair. Thank you.—**Joseph Harrington, 3rd**, Secretary, 22 Hidden Road, Andover, Mass. 01810.

## '62

I trust that everyone had a most enjoyable summer. There were undoubtedly a lot of moves and changes during this period, and I would like to hear about them. **Abe Aronow** wrote that he was working in cardiology at Stanford Medical School for the summer. His roommate, **Lynn Whelchel**, was to work as an extern in his home town of Miami,

Fla. . . . **Steve Levy** wrote that after receiving his S.M. in industrial management at M.I.T. in June, 1963, he went to work for Steinberg's, Ltd. in Montreal, Canada, as controller of the Manufacturing Division. Steve appears to be enjoying both the job and the local French-speaking women. He also wrote that **Isaac Shanfield** is finishing up his master's degree at McGill University, that **Marty Rosen** is at the School of Industrial Management at M.I.T. and was to marry during the summer, and that **Peter Brown** recently married and is living in New Orleans. . . . **Charles Richards**, who is living in Endicott, N.Y., and working for IBM, was promoted to associate physicist in the Terminals and Printers Department. . . . **Dr. Jane Shell**, who received her Ph.D. in organic chemistry in 1962, is lecturing in chemistry at Reed College in Portland, Ore. . . . **Phil Kupritz** is a member of a winning architectural team to design a new headquarters building for the American Institute of Architects in Washington, D.C. Each of the six winners of the first stage of the competition was awarded \$5,000. The competition winner will be employed as architect for the project. Phil is working for the Perkins & Will Partnership and designed the Chicago Educational Television Center.

**James Knowles** has completed his basic training at Fort Jackson, S.C. Prior to entering the Army Reserve, he was employed as an engineer by the Southern New England Telephone Company in New Haven, Conn. . . . First Lieutenant **Neil Weatherbie** was graduated from the Air Training Command's communications-electronics programmers course at Tinker AFB, Okla. Neil is a communications officer with an Air Force Communications Service unit at Scott AFB, Ill. . . . **Alan Carlson** received his M.S. in electrical engineering from M.I.T. in June, 1964, and will continue working towards his Ph.D. He and his wife Sandy have one daughter, Wendy, age 1. . . . **Mickey Haney** writes that after two years of working for United Aircraft Corporate Systems Center in Connecticut, he is succumbing to the attractions of the West Coast and is going to work for Hughes Aircraft-Space Systems Division in El Segundo, Calif. He received his M.S. in electrical engineering from the University of Connecticut by attending night school. At Hughes, he will be doing space communications work in their Communications Satellite Laboratory, working on such projects as the Advanced Technological Satellite and the 'Early Bird' satellites for the newly formed COMSAT Corporation. . . . **Eugene Finkin** received his M.S. in mechanics from R.P.I. in June. . . . **John Banzhaf, 3d**, who is in his second year of law studies at Columbia Law school, was the first person to be issued copyrights on computer programs; he feels that this may have a widespread effect on the computer industry which might permit leasing of copyrighted programs.

**Dave Coker** received the highest academic average ever while attending the Basic Naval Aviation Officers School at Pensacola, Fla. He will be at



NAS Glynnco, Ga., for radar intercept officer training. Coker's mark was 68.20 and cracked the old mark set in 1961 of 65.93—this made Dave first in a class of 2,313. . . . First Lieutenant **Gary Bagnard** is a development engineering officer at headquarters of the Air Force Systems Command's Space Systems Division which recently occupied new facilities at Los Angeles. He is married to the former Diana Chrisman of Long Beach, Calif. . . . Second Lieutenant **Chester Riley** has been awarded silver pilot wings upon graduation from flying training at Craig AFB, Ala. He is being assigned to flying duty in a unit at McGuire AFB, N.J. . . . Captain **John Regenhardt** is a development engineering officer at the same Air Force Division as is Gary Bagnard, and the same holds true for First Lieutenant **Michael G. Buchen** (Either that's a pretty large division or a 1962 M.I.T. degree is an entrance requirement). . . . **Ed Linde** graduated with high distinction (top 3 per cent of the graduating class of 625) from the Harvard Business School in June and so did **Bob Wilhelm**. Ed is working for Tishman Realty and Construction Company in New York City and lives with his wife Joyce and son Douglas in Yonkers. I assume that **John Rollwagen** and **Mike Jablow** also graduated from Harvard Business School, but they have not informed me yet where they will be working. . . . **Gordon Mann**, second in a class of 195 at the School of Business at Stanford University, is working in the Central Finance Staff for Ford Motor Company in Dearborn, Mich.

**Barry Roach**, who graduated in the top 10 per cent from the Stanford Business School, is spending six months in the Marine Reserve program and will then go to work for McKinsey Company (management consultants) in San Francisco, Calif., in February, 1965. You can see that M.I.T. made a good showing in the nation's top business schools. I managed to graduate third, behind my roommate Gordie Mann, from the Stanford Business School. I am now working as a financial analyst for Oceanic Properties, Inc., a real estate development and management firm located in Honolulu, Hawaii. Oceanic is a subsidiary of Castle & Cooke, the largest of the island's Big Five companies and the parent company of Dole Pineapple. I plan to be married on October 25 to Linda White of Redwood City, Calif. Linda attended Foot-hill College in California; I met her while she was the registrar's secretary at the Stanford Business School. We will be married in Palo Alto, Calif., and will then live here in Honolulu. I will also be teaching management accounting in the night school at the University. Keep the letters coming so I can write more about you.—**Jerry Katell**, Secretary, c/o Oceanic Properties, Inc., 401 Kamakee Street, Honolulu, Hawaii.

'63

All kinds of mail has come in over the summer, so here goes. **Stan Peters** is at the Institute working on his Ph.D. in

linguistics. He is now married to the former Beverly Stough of Houston, Texas, and Wellesley College. . . . **Leland Perry** has returned to M.I.T. from Allied Chemical in order to finish work on his M.S. in Course XV. . . . **Dave Caskey** is now with the Sandia Corporation in Albuquerque, N.M., and recently married the former Beth Paines of Baltimore. He reports that the M.I.T. Club in Albuquerque is quite a lively one. . . . **Roy Thorpe**, '58, President of the M.I.T. Club of Northern New Jersey, invites anyone interested in the club's activities to contact him by phone or mail: 6701 Boulevard East, West New York, N.J. Tel: 201-UN 4-8949. The dues are a nominal \$3 a year. . . . **Ed Brudno** received his silver pilot wings in the Air Force last June. . . . **Nick Angelos** was commissioned a second lieutenant after finishing O.T.S. last June. . . . **Al Remo** completed his master's in geophysics at Caltech.

**Jim Ruttenberg** participated in U.S. Steel's technical summer program after receiving his master's in statistics at Stanford in June. . . . **Pete Rupp** spent the summer with Humble Oil and is working on his M.B.A. at the University of Chicago. . . . **Lou Friedrich** is at Berkeley doing graduate work in the Organic Chemical Department. . . . **Tony Gelsler** has worked for American Can, Dole Corporation (pineapples), and is back at the Institute in Course XX. . . . **Harold Solomon** spent the summer at UCLA's Institute of Geophysics and is now back at M.I.T. in XIX. . . . **Lance Webb** is now with Raytheon Missile Systems Division in Bedford after finishing his M.S. in statistics at Michigan State. . . . **Edwin Brush** is still at M.I.T. in Course III. . . . **Dan Massey** is now at Harvard. . . . **Allen Meyer** is studying political science at the University of Wisconsin. . . . **Andrew Campbell** is currently enrolled in mathematics at the Université de Paris. . . . **Jim Dailey** is at Humble in New Orleans. . . . **Steve Dittmeyer** will soon finish his M.S. in transportation at Yale. . . . **Lou Falvo** is with Goodyear in Akron. . . . **Bruce Krewinghaus** is staying on for a Ph.D. in Course X. . . . **Bob Petrich** married Patricia DuFour and is with Rohm & Haas Chemicals in Philadelphia. . . . **Ernie Robertson** is a teaching assistant in Course VI. . . . **Norm Weeks** is at the Chemical Engineering Practice School in New Jersey. . . . **George Bryant** is with the Peace Corps in Peru. He is working with city planners on a study of housing in three cities. . . . **Bart Cramer** is with the Navy at Portsmouth, N.H. . . . **Bud Risser** is finishing up at Wharton and is engaged to Fran Walker, formerly of Wellesley College and Janesville, Wis. If anyone has news, here is my new address.—**L. Robert Johnson**, Secretary, 11 Myrick Street, Allston 34, Mass.

'64

My backlog of information from the cards will soon be exhausted so please send me news about yourself and any of your

friends in our class, and I will guarantee your name in print. This magazine's deadline is six weeks before publishing time, so any news sent to me in early December, for example, should make the February issue. And now to begin. **Arnold Aaron** of Everett, Mass., is in graduate school and has founded his own company to market ideas on colorimetry and cryptography. . . . **Karl Achterkirchen** of North Hollywood, Calif., is at M.I.T. graduate school and a teaching assistant in electrical engineering. . . . **John Adamchak** of Stratford, Conn., is at M.I.T. on a NSF Traineeship. . . . **Richard Adamec** of Harrington Park, N.J., is in the Peace Corps in Chile. . . . **George Adaniya** is at M.I.T. on a full tuition scholarship. . . . **Ashok Advani** of Bombay, India, is in graduate school at Harvard. . . . **Mark Ain** of Sea Cliff, N.Y., is in graduate school at the University of Paris. . . . **Jim Allen** of Washington, D.C., is working for Procter & Gamble. . . . **Robert Alperstein** of N.Y.C. is working as a sales engineer at E. D'Appadonia Associates. . . . **Yeboah Amankwah** of Sunyani, Ghana is staying at M.I.T. for a Ph.D. in Course VIII. . . . **William Ames** of Austin is at Caltech with a NSF Fellowship. . . . **Walter Anderson** of Warwick, R.I., is a teaching assistant at M.I.T. On August 29 he married Betsey Eggleston of Warwick and Jackson College, '64. . . . **Mike Armstrong** of Lawrence, Kansas, is at Stanford Business School after a summer in Europe. . . . **Ed Arnn, Jr.** of Seat Pleasant, Md., is in M.I.T. graduate school with a fellowship and research assistantship. On August 22 he married JoAnn Gribble from the University of Maryland.

**Michael Auerbach** of Akron, Ohio, is at Cornell with an assistantship in chemistry. . . . **Mutis Aurelio** of Bucaramanga, Colombia, is in M.I.T. graduate school. . . . **Bob Bachrach** of Worcester, Mass., is in graduate school at the University of Illinois. . . . **John Bailey** of Johnson City, Tenn., is at the University of Tennessee on a NASA Traineeship in mathematics. . . . **Tom Baker** of Knoxville, Tenn., is engaged to be married and is continuing at M.I.T. . . . **Don Bamber** of Norwood, Mass., is at Stanford in psychology. . . . **Stephen Baron** of Millburn, N.J., is at M.I.T. on an A.E.C. Fellowship in nuclear engineering. . . . **Mark B. Barron** of Anderson, Ind., is at Stanford graduate school. . . . **Merrill Bateman** of American Fork, Utah, is in the Air Force as a first lieutenant. . . . **Peter Beamish** of New Rochelle, N.Y., is on the faculty of Phillips Academy in Andover. . . . **Robert Beardsley** of Menlo Park, Calif., is at M.I.T. in geophysics with an NSF Fellowship. . . . **Bill Bechtold** of Rochester, N.Y., has a work-study fellowship with Stanford and Lockheed Missiles and Space Corporation. . . . **Paul Berger** of Boston is in the business school at Chicago. . . . **Arthur Best** of Phobna, Md., has joined the National Guard. . . . **Ralph Bestock** of Skokie, Ill., has a tuition scholarship at Northwestern. . . . **Dave Bivins** of Enid, Okla., is a civil engineering assistant at M.I.T. . . . **Henry Bliss** of Wilmette, Ill., is in graduate school at M.I.T. . . . **Ned Block** of Chicago is at Oxford University in



philosophy. . . . **James Bolani** of Newport, R.I., is in graduate school at Chicago. . . . **Joe Boling** of San Antonio, Texas, was married June 11 and is now in the Army. . . . **Steve Bolt** of Chevy Chase, Md., was married June 20 and is now at Stanford with an N.S.F. Fellowship in math.

**Lance Bosart** of Larchmont, N.Y., is at M.I.T. in meteorology. . . . **Jim Bradley** of Webster, N.Y., is teaching English and math in India with the Peace Corps. . . . **Donald Brayton** of Wellesley, Mass., is in M.I.T. graduate school. . . . **Robert Brooks** of New York City is working for Raytheon as an engineer and is presently engaged to Carol Kenney of Simmons. . . . **Douglas Browne** of Hamilton, Ohio, is at Illinois with a NSF Fellowship. . . . **John Brownell** of Worcester, N.Y., is engaged and now at Stanford with a research assistantship. . . . **Relva Buchanan** of Kingston, Jamaica, is working for IBM in Poughkeepsie. . . . **Len Buckle** of Steubenville, Ohio, is working for NET&T. . . . **Robert Bunker** of Richland, Ga., is working in the Army Nuclear Power Program in Idaho and is currently a captain. . . . **Jerry Burchfiel** of Oklahoma City is in M.I.T. graduate school. . . . **Jerry Burnett** of Sacramento, Calif., is also at M.I.T. for further study. . . . **Donald Cameron** of Atherton, Calif., is at Stanford Business School. . . . **John Carlin** of Eastchester, N.Y., is working for Boeing. . . . **Dick Carpenter** of Mohawk, N.Y., is at M.I.T. on a N.S.F. Fellowship. . . . **Walter Carrington, Jr.** of Thomaston, Conn., is a teaching assistant at Washington University in St. Louis. . . . **Edward Casper** of New Britain, Conn., is at Columbia for a Ph.D. in chemistry. . . . **Dean Casperson** of Clackamas, Ore., is at Stanford on a Shell scholarship. . . . **Howard Cedar** of Morristown, N.J., is at New York University medical school. . . . **Jim Chang** of New York City is also in medical school. . . . **Tom Cheek** of Newport News, Va. is in graduate school in Course VI.

**George Chen** of Lynbrook, N.Y., is at Brown with a research assistantship. . . . **Wayne Chiodi** of Camden, N.J., was married June 6 and is now working for R.C.A. . . . **Daniel Chow** of Belmont, Calif., is in graduate school at M.I.T. . . . **Alex Cimochoowski** of Forest City, Pa., is working for Control Data Corp. . . . **John Clarke** of Glens Falls, N.Y., has a fellowship and assistantship at Cornell. . . . **Paul Clermont** of Bennington, Vt., is at M.I.T. graduate school. . . . **King Clifford** of Grosse Pointe Farms, Mich., is working for the California-Texas Oil Company. . . . **Ernest Cohen** of Charlotte, N.C., has an assistantship at Case Institute. . . . **Marcus Cohen, Jr.** of Aurora, Ill., is at Stanford. . . . **Norman Cohler** of San Francisco has a NASA Fellowship at M.I.T. . . . **Joe Coldwell** of Tulsa, Okla., is working at the Smithsonian Astrophysical Observatory. . . . **Robert Colvin** of St. Charles, Mo., is at the Harvard Medical School on a scholarship. . . . **Pete Cook** of Los Gatos, Calif., is teaching electrical engineering in Ghana with the Peace Corps. . . . **Doug Cortelyou** of South Amboy, N.J., is in graduate school at Tech. . . . **Gilles Cosson** of Nancy, France, is at Pechiney

in St. Gobain, France. . . . **Philippe Cottard** of Paris is now in the military. . . . **John Cottrell** of Oxford, Conn., is at Cornell on a fellowship. . . . **Charles Counselman** of Baltimore, Md., is in graduate school at M.I.T. . . . **Jim Craig** of Hanover, N.M., is in the aeronautics department at Stanford. . . . **Giles Crimi** of Washington, D.C., was married June 20 and is working for G.E. as a program engineer in Philadelphia. . . . **Paul Croce** of Providence is in graduate school at M.I.T., as is **Bruce Crocker** of Houston. . . . **Steve Croopnick** of Brookline is studying at M.I.T. on a research assistantship. . . . **Ed Cross** of Billings, Mont., is at Purdue. . . . **Ted Cruise** of San Jose, Calif., is at M.I.T. on a NSF Fellowship. . . . **Amine Daouk** of Beirut, Lebanon, is at M.I.T. and plans to be married before he begins work. . . . **Frank Darmory** of New York City is studying at Columbia. . . . **Norman Davis** of Dover, N.H., is working for the government.

**Atif Debs** of Beirut, Lebanon, is in graduate school at M.I.T. . . . **Philippe Delori** of Ghent, Belgium, is in business. . . . **Robert Derrickson, Jr.** of Smyrna, Del., is in the Air Force. . . . **Mike Dertouzos** is an assistant professor of electrical engineering at M.I.T.; his wife is working on her Ph.D. in chemistry. . . . **William Devereaux** of Fontana, Wis., is at Caltech on a NSF Fellowship. . . . **Peter DiGiovanni** of Malden, Mass., was married June 13. . . . **Ray Dittman** of Cromwell, Conn., is a controls engineer at Hamilton-Standard. . . . **Roy Dody** of Fort Scott, Kansas, is a lieutenant in the Navy. . . . **James Dorr** of Haworth, N.J., is getting a Ph.D. in English at Indiana University. . . . **Keith Doty** of Enid, Okla., was married June 13 and is continuing at M.I.T. . . . **Jack Downie** of Pasadena, Md., is an engineer for the Gillette Company and is taking business night courses at Boston University. . . . **Mike Drooker** of Nahant, Mass., is in the Navy. . . . **Robert Duce** of San Antonio is working in the geology department at M.I.T. . . . **Tom Dyer** of Astoria, Ore., has a Fulbright Scholarship to the Technological University in the Netherlands. . . . **George Ebner** of Columbus, Ohio, is engaged to Norma Motley and is at M.I.T. with a NSF Traineeship. . . . **Engin Ekonomi** of Izmir, Turkey, was married to Carol Blake of Berlin, N.H., in June and is now studying at Berkeley. . . . **Ken Ekstrand** of Chicopee Falls, Mass., is attending graduate school at Cornell. . . . **Gerald Elder** of Great Falls, Mont., was married to Scovill Oberwager from Simmons this fall. He is now an American Cyanamid engineer. . . . **Charles Elias** of Rockville Centre, N.Y., is in law school at the University of Pennsylvania. . . . **Lee Erlebach** of Chicago has a teaching assistantship at the University of Washington. . . . **David Evans** of Beaver Falls, Pa., is at M.I.T. graduate school. . . . **Robert Eyestone** of LaGrange Park, Ill., is at Stanford on a NDEA Fellowship. . . . **Shaoul Ezekiel** of London is continuing at M.I.T. . . . **Stephen Femino** of Milton, Mass., is in graduate school. . . . **Amilcar Ferrari** of Florianopolis, Brazil, is in his country's Navy. . . . **Jeanne Fertel**

of New York City is at Johns Hopkins with a teaching fellowship. . . . **Edward Feustel** of Fort Wayne, Ind., is at Princeton with a NSF Traineeship. . . . **Maurice Finocchiaro** of Hartford, Conn., is in graduate school. . . . **Robert Fischer** of Darien, Conn., is at M.I.T. working for a second S.B.

**Daniel Flamm** of San Francisco is in graduate school at M.I.T. . . . **David Flannery** of Indianapolis is also in M.I.T. graduate school. . . . **Chesney Floyd** of Ness City, Kansas, is at Stanford Law School. . . . **Sherman Francisco** of Smethport, Pa., was married to Lizbeth Kocher in May and is now working for IBM. . . . **Ron Frashure** of Panama City, Fla., is at M.I.T. in Course XV. . . . **David Freeman** of Chatham, N.J., is at M.I.T. with a NSF award. . . . **John Freeman** of Gallup, N.M., is working for the Sandia Corporation and going to graduate school at the University of New Mexico. . . . **Steve Friedlander** of New York City is at Columbia on a teaching assistantship. . . . **Harvey Friedman** of Paterson, N.J., is at M.I.T. graduate school. . . . **Marvin Friedman** of Cincinnati is also at M.I.T. . . . **Don Fulton** of Everett, Mass., is in graduate school at Northeastern. . . . **Leonard Gage** of Vestal, N.Y., is at Chicago with a traineeship. . . . **John Galant** of Columbia, S.C., is at the University of South Carolina with a NASA Traineeship. . . . **Alan Gamse** of Pikesville, Md., is at Georgetown or University of Pennsylvania law school. . . . **Charles Gaylord** of Staunton, Va., is working for Adams Associates as a senior programmer. . . . **Jim Giffin** of Wadsworth, Ohio, is at M.I.T. with a NSF Fellowship. . . . **Monte Giles** of Olympia, Wash., is in the Peace Corps in Nigeria. . . . **Steve Glassman** of Flushing, N.Y., is working for the U.S. Patent Office and attending Georgetown Law School. . . . **Ernest Glickman** of Newton is now serving in the Air Force. . . . **James Goodwin** of Manchester, N.H., is in the Navy and working at the ship yard in Long Beach. . . . **Edward Graham** of Washington, D.C., is at Carnegie Tech with a NASA award. . . . **Robert Grant, Jr.** of South Bend, Ind., is in graduate school at M.I.T. . . . **Barry Greene** of Brooklyn is a research assistant in metallurgy and at M.I.T. graduate school. . . . **Larry Greenley** of Waterloo, Iowa, is at the State University of Iowa. . . . **Gerald Greenstein** of Revere, Mass., is in food engineering at M.I.T. . . . **Eric Greenwell** of Kaneohe, Hawaii, has gone into business. . . . **Jon Gruber** of Pittsburgh is at M.I.T.'s Sloan School of Management. . . . **Conrad Grundlehner** of Spring Lake, N.J., is in graduate school at the University of Pennsylvania. . . . **Carl Gustafson** of Quincy, Mass., is in business. . . . **David Guttman** of Chicago is in graduate school at Northwestern. . . . **Captain James Hall** of Port Huron, Mich., is an Army instructor at West Point. . . . **John Hanson** of Berwyn, Ill., is in graduate school. . . . **John Harkness** of Haworth, N.J., is working for Metals and Controls, Inc. . . . **James Harrill** of Raleigh, N.C., is an Air Force captain and pilot. . . . **Neal Harvey** of Orlando, Fla., is in M.I.T. graduate school. . . . **Lansing Hatfield** of Burlingame, Calif., is in graduate school at

# Sloan Fellows

News of many promotions for Sloan Fellows has come in during the summer months. **Russell C. Youngdahl, '63**, formerly organization analyst of Consumers Power Company in Jackson, Mich., has been appointed Executive Manager of Electric Operations for the company. . . . **John C. Davis, '56**, Assistant to the President of the Atchison Topeka and Santa Fe Railway System, is now Executive Assistant in charge of finance, with offices in Chicago. . . . **Robert D. Allen, '55**, also a former assistant to the president of the Consumers Power Company of Jackson, has been promoted to Vice-president. . . . **David Gould, '64**, has been appointed chief metallurgist at Caterpillar Tractor Corporation. Mr. Gould was formerly manager of materials and manufacturing development. . . . **Joseph W. James, '64**, has been appointed National Dealer Placement Manager for the Dodge Division of Chrysler Motors Corporation. . . . **Joseph R. Piselli, '63**, is now Vice-president for Engineering for Textron's Bell Aerosystems Company. Formerly Director of Engineering for the Aerospace-Rockets Division at Bell, Piselli was elevated to his new position as part of a major company reorganization. Piselli joined Bell 17 years ago as a rocket research engineer. . . . **John B. Beckwith, '58**, has been named General Manager of Bristol Divisions of Associated Spring Corporation. He was formerly Director of Manufacturing and

Engineering for the corporation. He joined the company in 1946 and is a graduate of Amherst College. . . . **William S. Crowley, '59**, the Haddonfield, N.J., plant manager for Campbell Soup Company, has been elected president of the Society of Sloan Fellows of M.I.T. He succeeds **Daniel K. Chinlund, '50**, of Allentown, Pa., assistant works manager of the Allentown Works of the Western Electric Company. Other officers elected were: Vice-president, **Thomas J. Carroll, '58**, an executive at the Tonowanda Forge Plant, Chevrolet Motor Division, General Motors Corporation, Tonowanda; Secretary and a Governor, **Colby H. Chandler, '63**, General Supervisor, Technical Services, Color Printing and Processing Organization, Kodak Parks Works, Rochester, N.Y.; Treasurer, **Leonard W. Golden, '55**, General Manager, Systems Control Division, Westinghouse Electric Corporation, Buffalo, N.Y.; Society Governors: **Robert H. Ausfahl, '50**, Assistant Manager, Motor Transport Department, Standard Oil of California, San Francisco; **Philip W. Lett, '61**, Operating Manager, Defense Engineering, Chrysler Corporation, Detroit; **William C. Mercer, '56**, Assistant Vice-president, American Telephone and Telegraph Company, New York; and **Walter Fisher, Jr., '64**, General Financial Supervisor, Bell Telephone Company of Pennsylvania, Philadelphia. —**Peter P. Gil**, Secretary, Room 52-455, M.I.T., Cambridge 39, Mass.

M.I.T. and a teaching assistant. . . . **Tom Hawk** of Fort Wayne, Ind., is at M.I.T. on a NSF Traineeship. . . . **Francis Healy** of Kennebunkport, Maine, is at M.I.T. on a practice school fellowship.

**George Heesch, Jr.**, of South Euclid, Ohio, was married July 11 and is now working for North American Aviation. . . . **Sandy Hellman** of Brooklyn is at M.I.T. with an assistantship. . . . **Ernest Henrichon, Jr.**, of Needham, Mass., is in graduate school at Purdue. . . . **Robert Hershey** of Lake Hiawatha, N.J., is working at Bell Labs. . . . **Theodore Hilgeman** of Riverhead, N.Y., is in graduate school at Caltech. . . . **S. C. Hirschi** of Paramus, N.J., is at Georg-August-Universitat DAAD with a scholarship. . . . **Richard Hodges** of Portland, Maine, is in graduate school at Boston University. . . . **Rudolph Hoffman** of Utica, N.Y., is either in industry or graduate school. . . . **Willmore Holbrow, Jr.** is working in the Air Force and is planning to marry Mary Erwin of Braintree, Mass. this month. . . . **Paul Holland** of Seattle, Wash., was married to Penny Claire of Seattle June 27 and is continuing at M.I.T. . . . **Brian Hollenbeck** of Babylon, N.Y., is in graduate school at M.I.T. on a research assistantship. . . . **Mayer Horn** of Brooklyn is working for the New York City Transit Authority as a civil engineer. . . . **Bob Howie, Jr.** of St. Paul, Minn., is a special

graduate student at M.I.T. and working in the Instrumentation Laboratory. . . . **Douglas Hoylman** of Kalispell, Mont., is in graduate school at the University of Arizona. . . . **Lee Huber** of Plymouth, Mich., is working for Texaco as a research chemist. . . . **Roger Hybels** of Kalamazoo, Mich., is in medical school at Michigan. . . . **A. A. Iarrobino** of Marblehead, Mass., is at M.I.T. with a NSF award. . . . **Arthur Triant** of Arlington, Mass., is at M.I.T. in food technology. . . . **Kenneth Jacobs** of San Bernardino, Calif., spent the summer in Europe and is now at Caltech on a teaching assistantship. . . . **Richard Jenkins** of Baltimore, Md., is working for the Atlas Chemical Industries. . . . **Martin Jischke** of Broadview, Ill., is at M.I.T. with a NSF Traineeship. . . . **William Johnson** of Chesterton, Ind., is a captain in the Air Force and a meteorologist. . . . **William Johnson** of London, Ontario, is at M.I.T. with a teaching assistantship. . . . **Harlan Johnston** of Des Moines, Iowa, is in the Air Force as a first lieutenant. . . . **Robert Johnston** of Darien, Conn., is in medical school at Johns Hopkins. . . . **Richard Johnstone** of Nottingham, England, is in business.

**Eric Jorgensen, Jr.** of Havertown, Pa., is in business school at Stanford. . . . **Leon Kaatz** of Huntington Woods, Mich., is working for the Service Bureau

Corporation and in graduate school at Chicago. . . . **Tehmau Kan** of New York City is at Cornell with a NSF Fellowship. . . . **Brian Kashiwagi** of Seattle is in graduate school at Stanford. . . . **Joseph Kasper, Jr.**, Baltimore, is at Cornell with research assistantship. . . . **James Kennedy** of Niagara Falls is a captain in the Air Force. . . . **Edward Khairallah** of Beirut, Lebanon, is on the staff at M.I.T. . . . **Heinz Killias** of Schaffhausen, Switzerland, is working for General Electric in their laboratory in Schenectady. . . . **Robert Kimmel** of Swampscott, Mass., is in graduate school at M.I.T. . . . **Joe Kirk** of Marshfield, Mass., is in business. . . . **Richard Kline** of Greenville, Pa., is in graduate school and has been married to Janette Misdorn since February. . . . **Bert Knight** of Louisville, Ky., is in graduate school at M.I.T. . . . **Bruce Knobe** of New York City is at the University of Illinois with an assistantship. . . . **Curtis Koch** of Sacramento is working as a mechanical engineer for General Electric. . . . **Vaughn Koester** of Flint, Mich., was married June 20 and is now at Michigan with a teaching fellowship. . . . **Elliot Koffman** of Brookline is at Case Institute with a fellowship. . . . **Frank Kofron, Jr.** of Chicago is in graduate school at M.I.T. . . . **Michael Kohn** of Oceanside, N.Y., is at the University of South Carolina with an assistantship. . . . **Benjamin Kwok** of Hong Kong is at M.I.T. in the Sloan School. . . . **Chun Kwong** of Hong Kong is also in Course XV graduate school. . . . **William Lakin** of Newton is at Chicago with a research assistantship. . . . **Judah Landau** of the Bronx was married to Francine Silver on June 14 and is now at Ohio State on a teaching assistantship. . . . **Warren Lang** of West Hempstead, N.Y., is in graduate school at Indiana. . . . **Mark Lappin** of Cherry Hill, N.J., is in graduate school at Pennsylvania. . . . **Glenn Larson** of Hawthorne, N.Y., is working for the National Security Agency. . . . **Clifford Laurence** of Pueblo, Colo., is working as a programmer for Wolf Research and Pevet Corporation. . . . **Ronald Lawson** of Quincy, Mass., is in graduate school at Northeastern. . . . **Richard Levine** of Longmeadow, Mass., was undecided at the time of writing. . . . **Roger Lewis** of Houston is in the Peace Corps working on an architectural project in Tunisia. . . . **Leon Liebman** of West Hartford, Conn., is in graduate school at M.I.T. . . . **Warren Littlefield** of Riverton, N.J., is in graduate school. . . . **Dino Lorenzini** of Exeter, Pa., is a development engineer with the Air Force. . . . **Emery Low** of Baltimore is working for the Boeing Company.

**Paul Lubin** of Chelsea, Mass., was married June 16 to Myrna Malsberg, a senior at Beth Israel Nursing School. He is now working at the M.I.T. Instrumentation Laboratory. . . . **John Ludutsky, Jr.** of Westbury, N.Y., is at Harvard Business School. . . . **Jerry Luebbers** of Park Ridge, Ill., is also at the Business School. . . . **Gary Lukis** of Cheektowaga, N.Y., is in graduate school at Stanford. I have enough news for December, but after that, it's up to you! Let me hear from you soon.—**Ronald L. Gilman**, Secretary, Dane Hall 204, Cambridge, Mass. 02139.





## Southern Californians Meet Incoming Freshmen At a Party in the Garden of Robert Welles' Home

The M.I.T. Club of Southern California held its annual undergraduate party last June 27 at the home of Mr. and Mrs. Robert Welles, '15, in Altadena. As customary, all present M.I.T. undergraduates who reside in Southern California, as well as incoming freshmen from the area, were invited and Mr. Welles' beautiful garden was the scene of the get-together. Sixty-three persons were present, including approximately 50 undergraduates.

Mr. Welles photographed the group with a Kodak Graflex, vintage 1919, which he had rigged with a remote control shutter lever. Following a tomato juice "cocktail hour," a chicken supper was served al fresco and Mr. Welles surprised all present with a popcorn roast around two barbecue braziers.

Mr. and Mrs. Welles' guests included Jeannetta McKenzie, Hiram E. Beebe, '10, Cleyon O. Yowell, '53, Jeffrey King, '68, Martin Chetron, '56, Francis D. Tuggle, '64, Harold H. Strauss, '38, and P. E. Golsan, Jr., '34.

## Western Pennsylvania Club Will Meet on Mondays

The M.I.T. Club of Western Pennsylvania expects to have another big year in 1964-1965. Plans call for meetings on Tuesday, October 20; Monday, December 7; Monday, March 1; and Monday May 3, 1965. Our Alumni Fund workers are planning a busy year, too, under the chairmanship of Donald A. Levenson, '48.

Last year the club assisted in the programs of the five smaller regions which are now combined into the Western Pennsylvania Region.

Those who worked on last year's drive are: North Hills Region, Charles R. Holman, '36, Chairman, William M. Laird, '43, and George Ley, '46, Vice-chairmen; Penn Hills Region, George S. Hubbard, '28, Chairman, William E. Abbott, '36, and Clyde A. Booker, Jr., '43, Vice-chairmen, John D. Eichenberg, '49, and Lee E. Strawbridge, '59, solicitors; Sewickley Region: Dr. George H. Kesler, '49, Chairman, Warren H. Howard, '44, and W. Ward Powell, Jr., '46, Vice-chairmen; South Hills Region, Henry Rockwood, '32, Chairman, William J. Bates, '35, Theodore W. Bossert, '20, Oliver J. Mendlar, '55, Stuart D. Miller, '32, Dr. Rufus N. Palmer, '25, and James A. Weissburg, '52, Vice-chairmen, Roger G. Christman, '51, Robert W. McKinley, '40, John A. Phinney, '38, Paul L. Tillson, '38, and M. Spalding Toon, '40, solicitors; and Squirrel Hill Region, Eli I. Goodman, '50, Chairman, Arnold Arch, '40, Kenneth Kotovsky, '61, and

Also: A. Schwartz, '47, P. K. Bates, '24, Stephen F. Brown, '65, T. Richard Schmidt, '66, Robert McKenzie, '31, Dan Greenhouse, '68, John Rible, '66, George N. Stiny, '67, Steven Tyler, '67, Fred Kuttner, '67, Bill Hawe, '52, Marv Sirbu, '66.

Also: Desmond Booth, '67, Thomas J. Herbert, '64, Kurt Wegner, Stan Pliska, '65, Elliott Green, '66, Ed Strauss, '65, Rod Schmidt, '67, Art Warshaw, '67, Mark Green, '68, Jerry Fields, '67, Thomas Percer, '66, Steven Bearman, '67, Bradford Bates, '59, Jack Barriger, '49.

Also: Philip Schwartz, '23, Orville Dodson, '68, Dick Schulze, '67, John Hiatt, '67, Lee McPherson, '66, Richard Coulter, '67, Allan Green, '66, Alan Steinman, '66, Steve Braunstein, '65, Ed Rhodes, '68.

Also: Henry Lichstein, '65, Bob Menzies, '65, Joel Robinson, '68, Mike Marlow, '67, Jim Evans, '63, Diana Leighninger, '67, Toni Schuman, '58, Edward Schuman, '57, and G. Schwartz, '67.—Arthur Schwartz, '47, Secretary, 144 South Camden Drive, Beverly Hills, Calif.

Donald A. Roellke, '57, Vice-chairmen, Dr. Peter J. M. Koros, '55, and Donald A. Levenson, '48, solicitors. An equally impressive team of workers is being organized for this year's drive.—Harry F. Raab, Jr., '50, 5053 Grove Road, Pittsburgh, Pa. 15236.

## Association of M.I.T. Alumnae Elects Officers And Exhibits Members' Art Work in McCormick Hall

A pleasant social hour, hosted by Professor and Mrs. Lynwood S. Bryant, faculty resident couple for McCormick Hall, opened the annual meeting of the M.I.T. Women's Association. Mrs. Stratton was a guest of the alumnae.

The by-laws were amended to make the organization's official name the Association of M.I.T. Alumnae, and the following officers were elected: President, Ruth Berman Pitt, '39; Recording Secretary, Susan E. Schur, '60; executive board members, Katherine Salisbury Hazen, '28, and Katherine Adams Kulmala, '44; membership committee member, Margaret T. Coleman, '50; auditor, Eleanor Johnson Spillsbury, '22; and nominating committee members, Frieda Omansky Cohen, '45 (chairman), Dorothy W. Weeks, '23, and Susan Lippman Kennenberg, '61.

Continuing in office are: Vice-president, Frances Emery Wypler, '39; Corresponding Secretary, Marjorie Quinlan Swift, '41; Treasurer, Alice Hunter Kimball, '36; executive board member, Alice Howe MacCready, '42; and member-

## Shigebumi Saito Heads Association in Japan

Last March 7 a dinner party was given at the Japan Industry Club, Marunouchi, Tokyo, in honor of Professor Walter A. Rosenblith, who was visiting Japan for the National Academy of Sciences. Although Dr. Rosenblith's tight schedule did not allow us to plan a grand party, the atmosphere was quite genial and everyone was pleased by the lively and exciting conversation. Attending the dinner were Tai-chiro Hori, '36, Dr. Soichiro Kuroki, Professor Shikao Ikehara, '28, Professor Shigebumi Saito, Professor Hiroya Fujisaki, '59, Shuji Inomata, Dr. Takashi Watanabe, '60, Hideo Seki, and Professor Eiichi Goto.

On June 6, the Association met to elect new officers. Serving for 1964-1965 are: Shigebumi Saito, President; Yukio Hori, '57, Vice-president; Hiroya Fujisaki, '59, and Masaaki Sakuta, '60, Secretaries.

## Milwaukee Club's President Now Is Arthur G. Hall, '25

Officers selected at the annual business meeting of the M.I.T. Club of Milwaukee are as follows: President, Arthur G. Hall, '25; Vice-president, Raymond H. Laub, '60; Treasurer, Charles L. Sollenberger, '44; Secretary, Kenneth L. Holmes, '51.

The annual meeting was combined with a theater party. Sixteen couples attended a performance of "Roberta" at the Melody Top Theater. . . . The first activity of the 1964-1965 season was a family picnic September 13 at Harold Koch's ('22) home on Pewaukee Lake.

On the second Tuesday of each month, club members meet at the University Club for luncheon. Visiting alumni are cordially invited to join us.—Kenneth L. Holmes, '51, Secretary, 4924 North Idlewild Avenue, Milwaukee 17, Wis.

ship committee members, Linda Greiner Sprague, '61 and Mary E. Guinan, '42.

Dinner followed the business meeting, and was, in turn, followed by the opening of the Alumnae Art Show held from June 11-15 in McCormick Hall. Exhibitors included Anne C. Bickford, '50, watercolors; Eunice Hull Campbell, '44, oils; Frieda Omansky Cohen, '45, oils; Joanna Muckenhoupt Enzmann, '58, afghan; Margaret Zaroodney Freeman, '34, sculpture; Mary Morrison Kennedy, '25, interior design; Beatrice Paipert, '51, sculpture; Marjorie Pierce, '22, architectural display; Susan E. Schur, '60, tempera, oils, and pen and inks; Nina Howell Starr, '40, photography; Joan Sullivan, '50, oils; Adelaide Toombs Sundin, '47, porcelain medallions; Helen Moody Traylor, '32, oils and gouaches; Amelia Brooks Valtz, '37, weaving; Ida B. Webster, '23, architectural display; Cynthia Kolb Whitney, '63, watercolors; Marian Andrews Wilkins, '31, fingerpaint.—Susan E. Schur, '60, Recording Secretary, 1 Emerson Place, Boston, Mass. 02114.



## Atlantans Re-Elect Leaders And Hear Professor Draper

Business and pleasure were combined at the annual meeting of the M.I.T. Club of Atlanta last May 22 at the Commerce Club. The date was selected to take advantage of a trip to the Air University and Huntsville by Professor Charles S. Draper, '26, Head of the M.I.T. Department of Aeronautics and Astronautics. After dinner, Club President C. P. "Pat" Moore, '48 presided at a business meeting at which Fred Dickerman, '30, Chairman of the Nominating Committee, proposed that the present slate of officers be elected for another year. No dissenting votes were cast, and the officers are: President, C. P. Moore, '48; Vice-president, William T. Shuler, '38; Secretary-Treasurer, Bernard H. Meyer, '42. It was moved and approved by unanimous vote that the regional chairman of the Alumni Fund Raising Committee be made an ex-officio member of the board of the Club.

Dr. Draper gave a most interesting talk on education, science and industry as they relate to the Apollo Project. Sixteen guests and the following members attended the meeting: Cecil and Mrs. Alexander, '43, James C. and Mrs. Bailey, '52, Winston A. Cartledge, '55, Zach S. and Mrs. Cowan, '44, Dr. Benjamin J. and Mrs. Dasher, '52, Joseph T. Davis, '61, Fred N. and Mrs. Dickerman, '30, Raymond K. and Mrs. Flege, '32, Michael E. and Mrs. Halpern, '55, Charles K. and Mrs. Holmes, '49, William E. and Mrs. Huger, '22, Bernard H. and Mrs. Meyer, '42, Charles W., Jr., and Mrs. Mills, '35, C. P. and Mrs. Moore, '48, Robert, Jr., and Mrs. Oppenlander, '44, Merlyn E. and Mrs. Richardson, '34, Dr. Dimitrios A. and Mrs. Polychrone, '47, Elmer E. and Mrs. Sanborn, '22, William T. and Mrs. Shuler, '38, William F. and Mrs. Spreen, '34, Dr. James R. and Mrs. Stevenson, '50, Abner A. and Mrs. Towers, '39, Brian P. Tunstall, '52, Harry M., Jr., and Mrs. Walton, '49, Marion C. and Mrs. Manderson, '53, Morton M. and Mrs. Gruber, '58, and Roger W. and Mrs. Allen, '27.—Bernard H. Meyer, Secretary, Brookgreen Road, Atlanta 28, Ga.

## Seattle Alumni Discuss Business District Plan

The M.I.T. Club of Puget Sound met on May 26 at the Windjammer Restaurant in Seattle to hear John D. Spaeth, Jr., Director, describe the Seattle Central Business District Plan for 1985. This plan has aroused a great deal of discussion in Seattle, and the meeting gave alumni an opportunity to question some of its controversial aspects, i.e., pedestrian malls, rapid transit, waterfront redevelopment, inner-ring road costs, and so on. The plan has been a co-operative effort by public and private enterprises to solve current and future growth problems for the Seattle metropolitan area.

Newly-elected officers for the Club are: President, Andrew T. Hengesteg, '55; Vice-presidents, Otto E. Kirchner, Jr., '49, and Hans Bebie, '39; Secretary, William J. Sullivan, Jr., '51.—William J. Sullivan, Jr., '51, Secretary, 646 S.W. 145th Street, Seattle, Wash.

## Florida Clubs Plan State Conventions

The Florida Central Club is organizing the first of a proposed series of annual two-day state conventions of all M.I.T. Alumni. The purpose of the meetings would be to formulate plans for more active and worthwhile programs for all Florida Clubs. The unofficial program for the first convention, to be held January 22 and 23 in Tampa, calls for two Club Committees sessions, dinner with Dr. Killian as our guest and a Tampa Pops Concert to be held in Tampa's new convention center, featuring orchestra conductor Alfredo Antonini and a guest star.

Any suggestions concerning the program by clubs experienced in this type of project would be appreciated. Please send all comments and suggestions to the Central Florida Club Secretary.—D. J. Athan, Secretary, 825 South MacDill Avenue, Tampa, Fla. 33609

## Chicago Club Entertains Freshmen and Their Fathers

The M.I.T. Club of Chicago held a reception for Chicago area freshmen, undergraduates and their fathers on August 20 at the University Club of Chicago. The meeting was attended by about 60 freshmen and undergraduates (most of whom brought their fathers) and more than 20 educational counselors, club directors and officers. E. Charlton Crocker, '43, the new club president, said a few words, but most of the evening was spent conversing and introducing the students to the M.I.T. Club of Chicago. Other new club officers present were Warren N. Barr, Jr., '49, Vice-president; E. Alfred Picardi, '44, Treasurer, and the Secretary.—John W. Kunstadter, '49, Secretary, 400 South Peoria Street, Chicago 7, Ill.

## Stevens Towing Tank Lab Is Host to M.I.T. Group

The Northern New Jersey Club visited the Towing Tank of the Davidson Naval Laboratory at Stevens Institute of Technology last June 30. After an informal dinner at the Student Center, Hugh W. MacDonald, '33, director of the laboratory, guided 35 alumni and guests through the three towing tank laboratories and described the work done in each. The trip was arranged by Colonel Carlo De Gennaro, '53.—Martin King, '44, 325 Dorothy Street, Fairlawn, N.J.

## Wilmington Club Hears M.I.T. Science Dean

Last April 16, the M.I.T. Club of the Delaware Valley held its spring dinner-meeting at the Wilmington Country Club, and heard Dean Jerome B. Wiesner of the School of Science at M.I.T. describe his work in Washington as President Kennedy's Special Assistant on Scientific Affairs. He explained that the late President relied heavily on his scientific advisers and called upon them for opinions on a broad range of issues.—John B. Murdock, Secretary, '41, 15 Runnemeade Avenue, Lansdowne, Pa.

## New Mexico Old-Timers Enlightened by Youngsters

The New Mexico Club enjoyed its annual spring outing high in the Pecos Mountains at the Mountain View Lodge the weekend of June 6-7. Members present were Carter and Mrs. Bennett, '42, from Las Vegas; Marvin Causey, '50, and his daughter; Tom and Mrs. Godfrey, '50; Ray Holland, Jr., '34, and daughter from Rosewell; Max and Mrs. Ilfeld, '24; Ben and Mrs. Powell, '23; Bob Quinlan, '30; Tom and Mrs. Raftery, '31; Les Redman, '47; and Ed and Mrs. Saville, '60.

The club entertained some Institute students at luncheons during the summer. Among those attending were Jim Raddin, Jr., '67, Homa J. Lee, Jr., '65, Gary Minagawa, '68, Bob Perret and Jack Hansen. After hearing details of current work at M.I.T., many of us old-timers are glad we matriculated "way back when."

The fall meeting of the Club was held at Los Alamos, October 3. Hosts for the occasion were T. N. K. Godfrey, '50, L. M. Redman, '47, and W. W. Boyer, '20. The Godfreys opened their home to the group for a social get-together prior to the luncheon, which was held at the Los Alamos Golf Club. Speaker Phillip Lovato is Project Co-ordinator for the Northern Rio Grande Resource Conservation and Development Project.—Thomas J. Raftery, '31, Secretary, 1915-B Alvarado Drive, N.E., Albuquerque, N.M. 87110.

## Northern Californians Brief the Freshmen

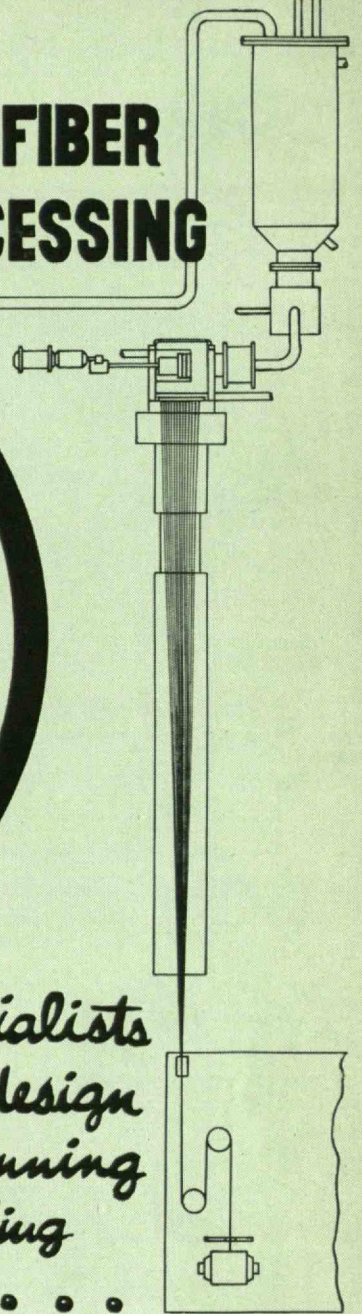
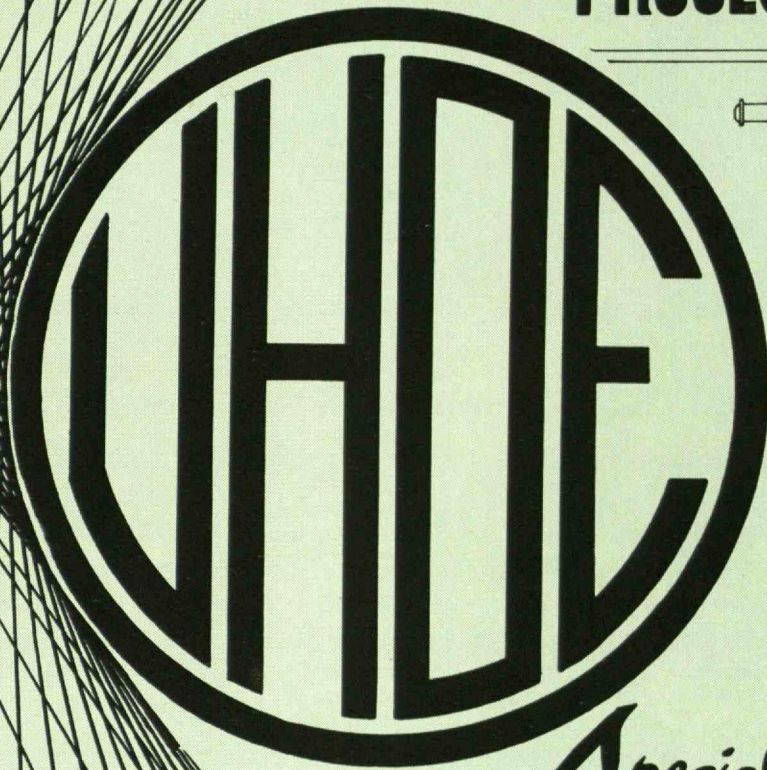
The M.I.T. Club of Northern California held its annual party for undergraduates August 28, providing incoming freshmen from the Bay Area a chance to meet other undergraduates. The "old pros" who have already "been through the mill" gave the anxious freshmen answers to many important inquiries. This year the party was held at the home of Gilman Y. Murray, '44, in Los Altos Hills, and co-sponsored by Roger S. Borovoy, '56, Donald Furlong, '44, Lionel S. Galstaun, '34, H. Royce Greatwood, '24, George M. Keller, Jr., '48, Denman K. McNear, '48, Robert N. Noyce, '53, Richard T. Perry, '25, and Bert Summers, '34.—Roger S. Borovoy, Secretary-Treasurer, Fairchild Semiconductor, P.O. Box 880, Mountain View, Calif. 94041.

## M.I.T. Club of Hawaii Obtains New Members

The M.I.T. Club of Hawaii has added Gerald L. Katell, '62, Courtland Ross, '57, and William Walk, Jr., '47, to its roster. Katell is financial analyst with Oceanic Properties, Inc., a real estate development firm in Honolulu, utilizing both his M.I.T. civil engineering background, especially in critical path analysis, and business school financial training. Mr. Katell was graduated from Stanford University Graduate School of Business last June. In the summer of 1963, he worked as a junior civil engineer for the State of California.—Franklin Y. K. Sunn, Secretary, 195 South King Street, Honolulu, Hawaii 96813.



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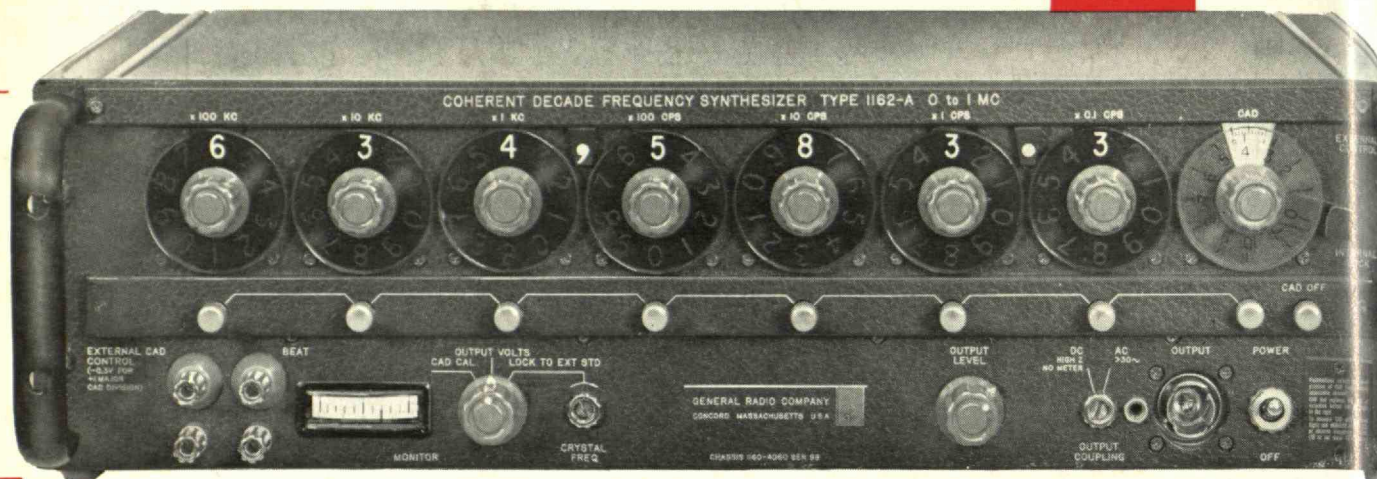
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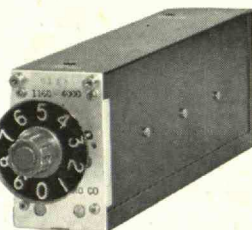


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